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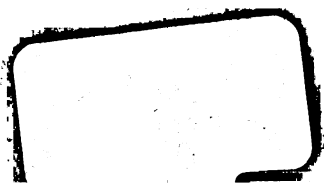
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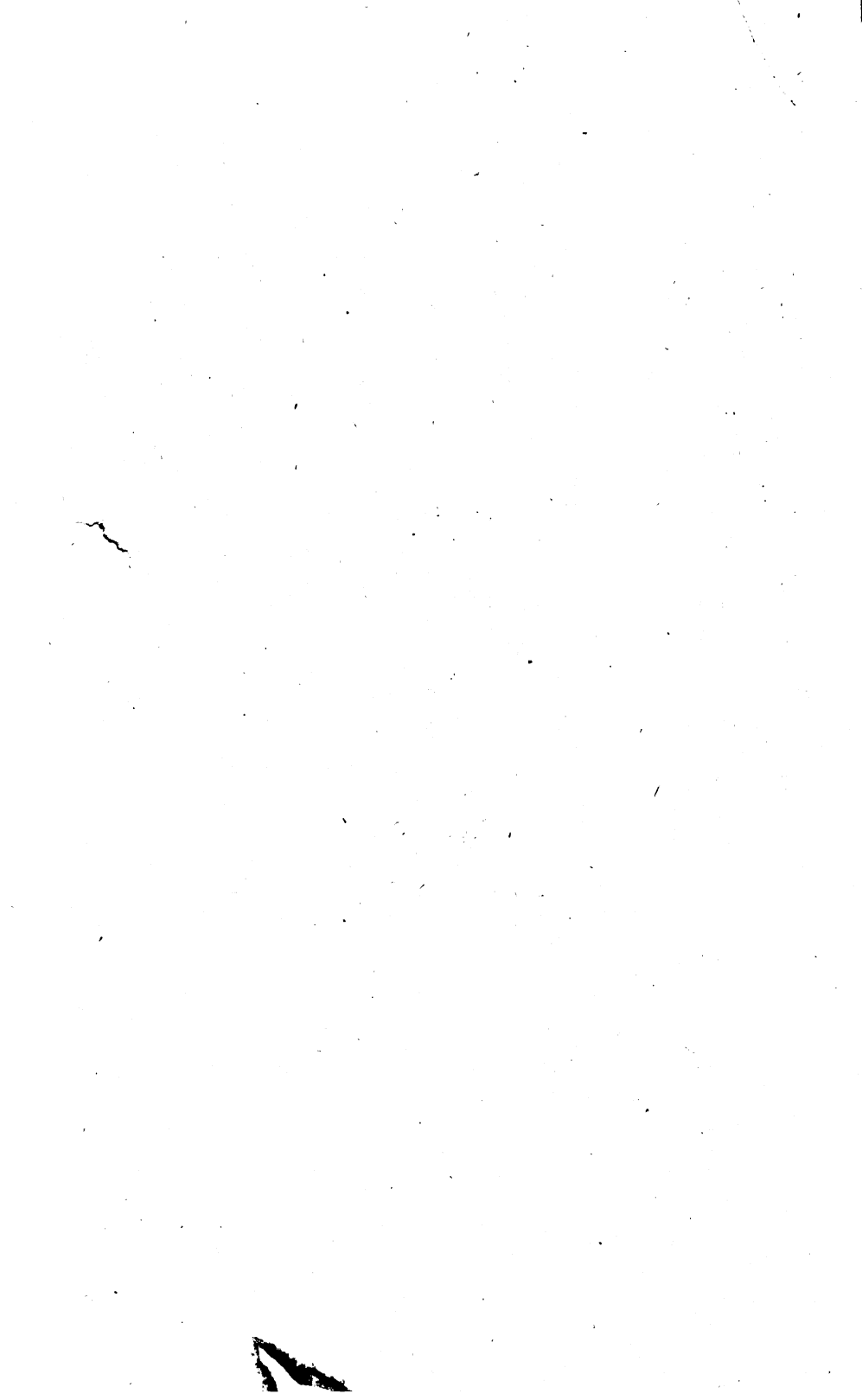


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# THE STUDENT:

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## FAMILY MISCELLANY

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THE PHYSICAL, MORAL, AND INTELLECTUAL IMPROVEMENT OF YOUTH; EMBRACING  
THE NATURAL SCIENCES, BIOGRAPHY, HISTORY, PHONOGRAPHY,  
DRAWING, AND MUSIC.

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N. A. CALKINS, EDITOR.

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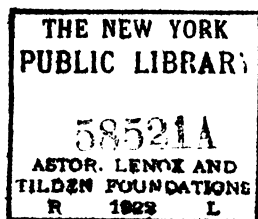
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# THE STUDENT:

A FAMILY MISCELLANY, AND MONTHLY SCHOOL-READER.

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## THE NOBLENNESS OF A TRUE LIFE.

BY HON. HORACE MANN.

**W**HOEVER yields to temptation debases himself with a debasement from which he can never arise. This, indeed, is the calamity of calamities, the bitterest dreg in the cup of bitterness. Every unrighteous act tells with a thousand fold more force upon the actor than upon the sufferer. The false man is more false to himself than to any one else. He may despoil others, but himself is the chief loser. The world's scorn he might sometimes forget, but the knowledge of his own perfidy is undying. The fire of guilty passions may torment whatever lies within the circle of its radiations; but fire is always hottest at the center, and that center is the profligate's own heart.

A man can be wronged and live; but the unresisted, unchecked impulse to do wrong is the first and second death. The moment any one of the glorious faculties with which God has endowed us is abused or misused, that faculty loses, for ever, a portion of its delicacy and its energy. Every injury which we inflict upon our moral nature in this life, must dull, for ever and ever, our keen capacities of enjoyment, though in the midst of infinite bliss, and weaken our power of ascension, where virtuous spirits are ever ascending.

It must send us forward into the next stage of existence maimed and crippled, so that, however high we may soar, our flight will always be less lofty than it would otherwise have been; and however exquisite our bliss, it will always be less

exquisitely blissful than it was capable of being.

Every instance of violated conscience, like every broken string in a harp, will limit the compass of its music, and mar its harmonies for ever. Tremble, then, and forbear, oh man! when thou wouldst forget the dignity of thy nature and the immortal glories of thy destiny; for if thou dost cast down thine eyes to look with complacency upon the tempter, or lend thine ear to listen to his seductions, thou dost doom thyself to move for ever and ever through inferior spheres of being; though dost wound and dim the very organ with which alone thou canst behold the splendors of eternity.

The world is entering upon a new moral cycle. The great heart of humanity is heaving with hopes of a brighter day. All the higher instincts of our nature prophesy its approach; and the best intellects of the race are struggling to turn that prophecy to fulfillment. Thoughts of freedom, duty, benevolence, equality, and human brotherhood agitate the nations; and neither the pope with his cardinals nor the czar with his Cossacks, can repress them.

Were these thoughts imprisoned in the center of the earth, they would burst its granite folds, speed onward in their career, and fulfill their destiny. They are imbued with a deathless vigor. They must prevail, or the idea of a Moral Governor of the universe is an imposture, and the divine truths of the Gospel a fable.

Here, then, is opened a new and noble career for the ambition of emulous youth; not the ambition for subduing men into slaves, but the holy ambition of elevating them into peers; not for usurping principality or kingdom, but for building himself up into principality and kingdom; not merely for gathering renown, as it were, star by star, to be woven into a glittering robe for his person, or to make a crown of glory for his head; but to expand his own soul into grander proportions, to give it angelic and archangelic loftiness of statue, and to fill it perpetually with that song of joy which even the morning stars could not but sing when they beheld the splendor of the Godhead reflected from the new creation.

Here are opportunities, means, incitements, through which the young man may build himself up more and more into a likeness of the universe in which he dwells, and configure himself more and more to the Infinite Perfection that governs it.

In a physical and in a spiritual sense, the universe around us is full; and, as we can not go beyond the circumference of present physical discoveries without discovering new theaters of being, so we can not go beyond the circumference of existing spiritual relations without finding new spiritual relation.

Columbus was devoted to the study of geography. As the result of that study, he felt that there was a continent to be discovered; and he discovered it. The mind of Newton pondered on astronomical truths. His contemplations engendered the belief that some cohesive principles bound together the worlds on high; and he demonstrated the law of gravitation. Washington was a patriot. He yearned for liberty; and by his valor and his wisdom our republic was established.

So new moral blessings and beauties are certain to reward the efforts of new moral power, whatever direction that power may take. Grandeur discoveries than any which have yet been made, revelations that lay beyond the ken of Bacon's far-seeing vision, and beauties that shone outside the imagination of the vast-minded Shakspeare, await the evoking power of philanthropic genius.

Benevolence is a world of itself, a world which mankind, as yet, have hardly begun to explore. We have, as it were, only skirted along its coasts for a few leagues, without penetrating the recesses, or gathering the riches of its vast interior. Hostile nations and repugnant races of men are wayward and devious orbs, yet to be brought into a system of brotherhood by the attractions of love. Justice, honor, love, and truth, are the corner-stones of the holy government which is yet to be organized upon earth.

For all true-hearted adventurers into these new realms of enterprise, there are moral Edens to be planted, such as Milton with his celestial verse could never describe, and there are heights of moral sublimity to be attained, such as Rosse with his telescope could never descry.

Glowing with a vivid conception of these truths, so wonderful and so indisputable, let me ask, whether, among all the spectacles which earth presents, and which angels might look down upon with an ecstasy too deep for utterance, is there one fairer and more enrapturing to the sight than that of a young man, just fresh from the Creator's hands, and with the unspent energies of the coming eternity wrapped up in his bosom, surveying and recounting, in the solitude of his closet or in the darkness of midnight, the mighty gifts with which he has been endowed, and the magnificent career of usefulness and of blessedness which has been opened before him; and resolving, with one all-concentrating and all-hallowing vow, *that he will live, true to the noblest capacities of his being, and in obedience to the highest law of his nature!*

If aught can be nobler or sublimer than this, it is the life that fulfills the vow. Such a young man reverences the divine skill and wisdom by which his physical frame has been so fearfully and wonderfully made; and he keeps it pure and clean, as a fit temple for the living God. For every indulgence of appetite that would enervate the body, or dull the keen sense, or cloud the luminous brain, he has a "Get thee behind me!" so stern and deep, that the balked satans of temptation slink from before him in shame and despair.

Hypocrisy and pharasaical pride are loathsome to the young man of a true heart, yet he rejoices to be known, at all times and everywhere, as a religious man; for, not less in the marts of business and the hilarities of social intercourse, than in the sanctuary or on the death-bed, he feels how infinitely unmanly it is to be ashamed of the noblest and divinest attribute in all his nature.

And when, in the fullness of patriarchal years, crowned with clustering honors, and covered with the beatitudes, as with a garment, he brings his heroic life to a triumphant close, the celestial light that bursts from the opened and welcoming gates of heaven, breaking upon his upturned countenance, is reflected into the paths of all surviving men; and the wings of his spirit, as it ascends, fan the earth with odors from the UPPER PARADISE.

[The foregoing article is from a little book entitled "Thoughts for a Young Man," a most excellent work, and one which every young man should read.]

*Cardinals*, ecclesiastical priests in the Roman Catholic church. They compose the pope's council. *Czar*, the title of the emperor of Russia. *Cossacks*, the military people of the Russian empire, skilled in horsemanship, who inhabit the Ukraine. *Newton*, Sir Isaac Newton, the greatest of philosophers, was born at Colstetworth, England, in 1642. He died in 1727. *Bacon*, Sir Francis Bacon was an Englishman, and born in 1561. As a man of genius, a philosopher, and a writer, he is universally admired. He died in 1626. *Shakspeare*, William Shakspeare was born in 1564, at Stratford on the Avon. His father was a wool-dealer. He was the greatest dramatic writer that ever lived. He died on his birthday, in 1616. *Be-a-ti-tudes*, happiness of the highest degree.]

### THERE'S A SILVER LINING TO EVERY CLOUD.

THE poet or priest who told us this  
Served mankind in the holiest way  
For it lit up the earth with the star of bliss  
That beacons the soul with cheerful ray.  
Too often we wander, despairing and blind,  
Breathing our useless murmurs aloud;  
But 'tis kinder to bid us seek and find  
"A silver lining to every cloud."

May we not walk in the dingle ground  
When nothing but autumn's dead leaves are  
seen,

But search beneath them, and peeping around  
Are the young spring-tufts of blue and green.  
'Tis a beautiful eye that ever perceives  
The presence of God in Mortality's crowd;  
'Tis a saving creed that thinks and believes  
"There's a silver lining to every cloud."

Let us look closely before we condemn  
Bushes that bear no bloom nor fruit;  
There may not be beauty in leaves or stem,  
But virtue may dwell far down at the root;  
And let us beware how we utterly spurn  
Brothers that seem all cold and proud—  
If their bosoms were opened, perchance we  
might learn  
"There's a silver lining to every cloud."

Let us not cast out Mercy and Truth,  
When Guilt is before us in chains and shame,  
When Passion and Vice have cankered youth,  
And Age lives on with a branded name;  
Something of good may still be there,  
Though its voice may never be heard aloud,  
For, while black with the vapors of pestilent air  
"There's a silver lining to every cloud."

Sad are the sorrows that oftentimes come,  
Heavy and dull, and blighting and chill,  
Shutting the light from our heart and our home,  
Marring our hopes and defying our will;  
But let us not sink beneath the woe,  
'Tis well, perchance, we are tried and bowed,  
For be sure, though we may not oft see it below,  
"There's a silver lining to every cloud."

And when stern Death, with skeleton hand,  
Has snatched the flower that grew in our  
breast,  
Do we not think of a fairer land,  
Where the lost are found, and the weary at  
rest?

Oh! the hope of the unknown future springs,  
In its purest strength o'er the coffin and shroud,  
The shadow is dense, but Faith's spirit-voice  
sings  
"There's a silver lining to every cloud."

Selected.

MEN should labor zealously for the community, strenuously for their friends, and sufficiently for themselves.



SIR JOHN FRANKLIN.

BY N. ALLISON.

**S**IR JOHN FRANKLIN was born at Spilsby, in Lincolnshire, England, in 1786. At the early age of fourteen he entered the royal navy as midshipman. We next hear of him embarking on a voyage of discovery to New Holland, on board the *Investigator*, commanded by Captain Flinders. During this voyage he was wrecked on the east coast of that island, where he remained with the crew for eight weeks, when they were relieved by a vessel from Port Jackson.

Mr. Franklin next proceeded to Canton, and on returning from thence to England, he was assigned the station of flag-midshipman on board the *Bellerophon*. He was on this vessel during Nelson's victory of Trafalgar, and distinguished himself for skill and bravery. In October, 1807, he was placed on board the

*Bedford*, in which ship he remained nearly eight years, employed on the Brazil, North Sea, and West Indian stations.

In 1818, Lieutenant Franklin was given the command of the *Trent*, on a voyage of discovery to the Polar Sea, north of Spitzbergen, under the orders of Captain Buchan. Another expedition was sent out at the same time under Captain John Ross, to explore the coast east of North America, within the Arctic Circle.

Early in 1819, John Franklin was appointed by Earl Bathurst to the command of an overland expedition from the shores of Hudson's Bay to the Arctic Ocean. The principal object of this expedition was to learn more about the geography of the northern portion of North America, which at that time was little known. He arrived in England on his return from this expedition in October, 1822. In 1823 he was

married to Eleanor Ann, daughter of Mr. Porden, an eminent artist. This lady early manifested talent as a poetess; and her poem entitled the "Arctic Expedition," led to her marriage with Captain Franklin.

In 1825, he again set out in command of an overland expedition through North America. His departure from England was under circumstances severely trying. His wife was lying at the point of death, yet, with heroic fortitude, she urged him to leave on the very day appointed; entreating him, as he valued her peace, and his own glory, not to delay a moment on her account. This was indeed a severe struggle between the affections and a sense of duty; but he started at the appointed time, and his wife died within a day or two after his departure.

The following extract from Sir John Franklin's journal of this expedition, alluding to his sorrows, is a beautiful instance of the grace that domestic tenderness lends to gallant fortitude.

"During our absence, the men had pitched the tent on the beach, and I caused the silk union-flag to be hoisted, which my deeply-lamented wife had made and presented me as a parting gift, under the express injunction that it was not to be unfurled before the expedition reached the sea.

"I will not attempt to describe my emotions as it expanded to the breeze; however natural, and for the moment irresistible, I felt that it was my duty to suppress them, and that I had no right, by an indulgence of my own sorrows, to cloud the animated countenances of my companions. Joining, therefore, in the general excitement with the best grace I could command, I endeavored to return with corresponding cheerfulness, their warm congratulations on having thus planted the British flag on this remote island of the Polar Sea."

Captain Franklin returned from this expedition in 1827, passing through the city of New York, on his way to England. During his journey to the Polar Sea, he obtained the name of *Great Chief*, among the Indians, who became very much attached to him. Though a bold and daring adventurer, and nobly brave

when bravery was needed, he was noted among them for his kindness and gentleness.

On the 5th of November, 1828, Captain Franklin was married to his second wife, Lady Jane Franklin. She was the second daughter of John Griffin, Esq., of Bedford Place, London. In April, 1829, Mr. Franklin received the honors of knighthood, in consequence of which he is called *Sir John Franklin*. In August, 1830, he was appointed to the command of the *Rainbow*, destined for the Mediterranean station.

He afterward became governor of Van Diemen's Land. On returning to England, in 1845, from his arduous services on that island, he received the command of another exploring expedition, to attempt once more a solution of the existence of a Northwest Passage. This expedition was to proceed by water in the ships *Erebus* and *Terror*, which had returned but a short time previous from an Antarctic expedition, under the command of Sir James C. Ross.

These vessels were refitted and supplied with every convenience which the repeated Arctic expeditions could suggest, together with provisions sufficient to last the crew, consisting of about 138 persons, for three years. On the 19th of May, 1845, they departed from England, and on the 26th of July following were heard from at Melville Bay. Since that period no reliable intelligence has been obtained in regard to their fate.

Three expeditions were sent out early in 1848, to search for these missing navigators. One, under the command of Sir James C. Ross, was to proceed on the track which Sir John Franklin had been instructed to take; another, commanded by Sir John Richardson, who is experienced in Arctic journeys, was to take the overland route, through North America; and the third was assigned to Commander Moore, and directed to proceed to Behring's Strait by the way of the Pacific.

The expedition under Sir James C. Ross, and also Sir John Richardson with most of his party, returned to England in November, 1849, without obtaining any intelligence of the long-lost navigators.

Dr. John Rae, who went out with Sir John Richardson, remained with a small party to continue the search during the summer of 1849. Recent intelligence from this party gives an account of their examinations in the vicinity of Coppermine River, and eastward, but no discoveries were made.

The expedition sent to Behring's Strait, passed the summer of 1849 in searching the coast from that strait nearly to the mouth of Mackenzie River; but it returned to winter in Kotzebue Sound, with no better success than attended the other two. However, it will resume the search during the present season, in the seas of that region.

Late intelligence from England states that the British Admiralty have decided to send out two more expeditions during the present spring. The first will consist of two sailing ships, the *Baboo* and *Ptarmigan*; the second, of two steamers, the *Eider* and the *Free-Trader*. These will be sent to Barrow's Strait and adjacent localities.

Mr. Henry Grinnel is now engaged in fitting up two vessels at New York, to be called *Lady Jane Franklin*, and *The Rescue*, which are to proceed on an expedition in search of Sir John Franklin, early in May, 1850, under the command of Lieutenant E. J. De Haven, assisted by Passed-midshipman S. P. Griffin. A secondary object of this expedition will be to solve the great problem of the Northwest Passage. The success of this and the similar expeditions, will be watched with great interest, throughout the civilized world.

## THE STARS.

BY MISS JANE E. HUTCHINS.

WHEN to his rest the day-king, wrapt in flames  
Of gorgeous light, hath sunk, and far along  
The western sky the clouds have gathered o'er,  
How soul-entrancing, then, the eye to lift  
Up to the deep-blue vault of heaven, and view,  
Assembled there, those myriads of stars.  
These, worlds on worlds unnumbered, roll in  
spheres

Their own. Each system, bound in viewless  
chains,

Through ages move, and still its course the same.  
Thus all, obedient to their Maker's law,  
The planets travel over the azure sky,  
While fixed stars, flashing from the ethereal  
depths,

In clusters bright, the milky-way compose.

They know no wandering, are for aye the  
same,

Twinkling in space, change not and are un-  
changed.

Those far off glittering stars! methinks they  
beam

As bright, their songs as joyous now, as when  
Earth from chaos burst, and they together  
Sang to hail creation's morn. They seem the  
Almighty's sentinels, as on their course  
Their duty to perform, they nightly o'er  
The silent earth, bright vigils keep. Per  
chance

They guide the seaman o'er the pathless wave,  
Or lead the Arab o'er his desert track;  
Or for a nobler work, may light with joy  
The winged spirit on its way to heaven,  
When freed from chains of earth.

Those stars, those bright  
And glorious stars! Oh what of earth have they  
Not seen since first 'twas made; and had they  
tongues,

What deeds of mystery could they not reveal;  
And of what scenes of might and chivalry—  
Of crowns and laurels won. Could they not tell  
Of blood-stained banner and of mangled corse—  
Of glorious victory and of high renown?  
As from their midnight throne they look to  
earth,

The sleeping wave their image doth reflect.  
They show the Almighty's handiwork, and are  
His brightest gems, with which He decks  
The crowns immortal. When son of earth, e'er  
Doth a soul reclaim, we say another  
Star is added to his crown in heaven.

And while, with wondering gaze, we upward  
look,

The soul expanding with the sight would fain  
Be free—would burst the chains that bind it  
here—

Would solve the hidden mysteries of Him  
Whose throne is far above the stars. But ah!  
Would earth's frail mortal e'er attempt to read  
What God hath written in the sky? Ah no.  
Till end of time those worlds of light will roll,  
And still through darkness will for ever shine.

## WASHINGTON'S RETIREMENT.

**I**n an address by Mr. Duer, we find the following interesting incident of Washington's retirement. Like every thing else relating to the father of his country, it is worthy of preservation:

At a subsequent period, it was again my good fortune frequently to see this great and good man. It was at Philadelphia, during the winter preceding the expiration of his last official term. On the day of the inauguration of his successor, I was present in the gallery of the House of Representatives. Washington was an attentive spectator upon the floor, "the observed of all observers;" nor is it any disparagement to the elder Adams to say, that if the presence of such a listener diverted the attention of others from his discourse, it was amply compensated by the attention paid to it by Washington.

At the close of the ceremony, as the venerable hero moved toward the door, there was a rush from the gallery that threatened the lives of those who were most eager to catch a last look at him who, among mortals, was the first object of their veneration. Some of us effected an escape by slipping down the pillars supporting the gallery.

I succeeded in making good my retreat through the outer door in time to see the retiring veteran, as he waved his hat in return to the cheers of the multitude, while his gray locks "streamed like a meteor to the wind." Seldom as he was known to smile, his face now beamed with radiance and benignity.

I followed him in the crowd to his own door, where, as he turned to address the multitude, his countenance assumed a serious and almost melancholy aspect, his voice failed him, his eyes suffused with tears, and only by his gestures could he indicate his thanks, and convey a farewell blessing to the people. This was the last I saw of the most illustrious of mankind, and should I live a thousand years, I "ne'er shall look upon his like again."

—

EDUCATION—the twilight that ushers in the rising sun of Liberty.

## A MOTHER'S VOICE.

The editor of the Cincinnati Atlas after a visit to the Asylum for the Deaf and Dumb at Columbus, Ohio, relates the following:

We inquired of an intelligent and modest young lady, who had become deaf from sickness when two years and a half old, whether she could recollect any thing of sounds or words. She answered that she could not.

It occurred to us that there might have been at least one sound which might be remembered even from that tender age, and we ventured to inquire whether she had no recollection of her mother's voice. It will be long before we forget the sweet, peculiar smile which shone upon her features, as, by a quick inclination of her head, she answered, yes.

What a world of thought and feeling clusters around such a fact! In all her memory there is but one sound, and that is her mother's voice. For years she has dwelt in a silence unbroken from without, but those gentle tones of love still linger in her heart. There, they can never die; and if her life should be prolonged to threescore years and ten, o'er the long, silent track of her life the memory of that voice will come, in loveliness and beauty, reviving the soul of weary old age with the fresh, lovely sounds of her cradle hours.

## TO YOUNG MEN.

It should be the aim of young men to go into good society; we mean not the rich, nor the proud, nor the fashionable, but the society of the wise, the intelligent, and the good. When you find men who know more than you do, and from whose conversation you can gather information, it is always safe to associate with them.

It has broken down many a man to associate with the low and vulgar, where the ribbald song was sung, and the indecent story told, to excite laughter or influence the bad passions. If you wish to be wise and respected, associate with the intelligent and good.



# Coats of Arms, or State Seals, No. 1.\*



## VIRGINIA.

**T**HE seal of Virginia represents the Goddess of Virtue, as the genius of the Commonwealth. She is dressed like an Amazon, resting with her right hand on a spear, holding another in her left hand, and treading on *Tyranny*, which is represented by a prostrate man, with a crown fallen from his head, holding a broken chain in his left hand, and a scourge in his right. The motto is, "*Sic semper tyrannis*," "Thus we serve tyrants."

In 1607, a company of "gentlemen, noblemen, and merchants," mostly residents of London, and called the *London Company*, sent out three ships under the command of Christopher Newport, with 105 men. The first permanent settlement in America was made by this company, at Jamestown, Virginia, in May, 1607. This little handful of men struggled hard and endured immense suffering. Before autumn of the first year, one half of their number had died. And but for the energy and courage of Captain John Smith, the father of Virginia, the whole colony would have perished.

Up to 1619, only a few females had ventured to cross the Atlantic, but during this year, ninety young women were induced to embark for America. They were brought over at the expense of the London Company, which was to be entitled to whatever the young planters in Virginia would pay for them as wives, to defray the expenses of their passage. These were sold for one hundred and twenty pounds of tobacco each. In 1621, sixty more females were brought over, for which the planters paid one hundred and fifty pounds of tobacco each.

This state has the honor of furnishing our nation with many of the most illustrious men in the annals of our history; and foremost among them all stands George Washington, the father of his country. Patrick Henry, whose stirring eloquence did so much in arousing the colonies to independence, was one of Virginia's noble sons. Seven out of the twelve presidents of the United States, had their birth-place in the "*Old Dominion*."

\* In a future number we shall give the origin of Coats of Arms, and explain their use as Public Seals.

## Science,

"Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### THE PRODUCTIONS OF PLANTS.

BY T. ANTISELL, M.D.

THE vegetation which every where adorns the surface of the globe, from the moss that covers the weather-beaten stone to the cedar that crowns the mountain, is overflowing with matter for reflection and admiration. To the vegetable kingdom we are indebted for the possession of almost all our comforts, and many of our luxuries. From the produce of some of the humblest of plants arises an extensive trade, employing many thousand families.

Take the article saffron as an example. Many tons of this useful substance are sent into the market every year; yet it is not generally known how small a portion of the plant it is. The plant itself is a crocus, and carries in its flower three little colored filaments, as they are called in botanical language. Every single plant can only furnish three filaments, which are gently plucked by girls, who gather them in baskets from innumerable flowers. These plants are sown, tended, weeded frequently, manured, and watered, and all to give but three fine threads each. After these are gathered the plant is of no further use. It is not wonderful, then, that good saffron should be costly.

Another plant, the safflower, or spurious saffron, contains a red color in the flower-leaves, or *petals*, in very small proportion, not more than five parts in every thousand. It is also difficult to obtain, being mixed up with a yellow color, which has to be first separated. But when obtained it is a most brilliant scarlet red, and is the basis of the *rouge* paint.

The uses of these two plants show how deeply ingrained into humanity certain habits become. Several hundred years ago, our Celtic forefathers stained their skins a yellow tint, with saffron steeped in water. From the analogous plant, the

safflower, our modern beauty derives the tint to tinge her skin, and give the hue denied by nature.

It is so with most other vegetables. The hemp and flax plants each furnish only a few fibers for cordage and linen. The quantity of sugar in the cane and the maple is small compared to the size of the plants. The essential oils found in plants exist in very small proportions, as camphor, oil of lemons, cloves, caraway, peppermint, etc., requiring large cultivation to obtain even moderate quantities.

Even the apparently worthless parts of plants are of great use. Who would imagine, at first view, that the old bark which peels so readily off the tree could be of any value? Yet without it we should not have our leather. It contains a substance which, from its action in hardening skin, has been called *tannin*. Animal skin is a collection of egg-shaped cells, full of a gelatinous fluid, which readily washes out by water, and is easily rotted; hence the untanned skin is not durable. But when soaked in a watery liquor, in which has been steeped the bark of some trees, the tannin soaks into the cells, unites with the gelatinous liquor, and forms a solid body, which does not dissolve in water, and will not readily rot. Such is the process of tanning, which converts a perishable skin into a durable leather.

A little insect pierces a hole in the leaf of the oak, and other trees, and buries its egg there. The leaf round about the bite hardens and enlarges so as to become a nut; the sun's heat hatches the egg, and the little insect bores its way out, and becomes in due time a perfect gall-fly. The leaf withers, and the gall-nuts are gathered. They contain the same substance as the oak-bark, and are used for similar purposes. The chief uses are the manu-

facture of ink, and the dying of cloth black.

When plants are cultivated, the properties they possessed in the wild state become altered in a remarkable degree. Many plants, which are poisonous when wild, become innocuous when cultivated. This has happened with the potato, the tubers of which were very small and poisonous a few hundred years ago. It is still a poisonous plant in Equador and New Granada. By constant cultivation the tubers have been developed, and they have not only increased greatly in size, but become filled with starch and other nutritious matters.

The same influence is also seen in the growth of wheat. This plant owes its nutritious property to the large quantity of a substance called *gluten*, which it contains. Gluten resembles dough, and may be obtained by kneading the flour into a paste, and washing it by exposure to a small stream of water. In wheat grown on poor ground, the gluten is not present in a greater quantity than four or five per cent., while in well-tilled lands it rises as high as one fifth of the whole weight. We have the power to increase the quantity of gluten up to this per centage, by proper care of the ground.

Gluten is the valuable substance for which wheat is grown, and it contains a chemical substance called nitrogen. Now, if we add as a manure some substance containing nitrogen in large quantity, as rape-dust, bones, or guano, this element enters the wheat, gluten is formed, and the weight and value of the wheat is much increased.

The Turkey red, so much admired in shawls and handkerchiefs, is obtained from the madder plant, which contains besides it two other colors. But the red is the most valuable, and exists in the smaller proportion. By cultivation, however, we can increase this quantity in a remarkable degree; for we find in those roots which contain the least quantity of lime the smallest quantity of the red coloring matter. If we add lime to the ground, so that the madder roots may imbibe it, the red color immediately commences to increase, and a large quantity of that beautiful dye is produced.

It may be learned from the above how much control we have over the growth of a plant, how we may increase the amount of any valued production to a very great extent, and what an interesting, useful, and even a scientific occupation, is the cultivation of plants.

[*Celtic*, pertaining to the early inhabitants of Italy, France, Spain, and Great Britain. The ancient inhabitants of the countries in the south and west of Europe were called Celts. *Essential Oils*, oils that are obtained from plants, chiefly by distilling them in water. They will dissolve in alcohol, and are used much in perfumery. *Ge-lat'i-nous*, an animal substance of the nature and consistence of jelly, or dissolved glue. *In-noc'u-ous*, harmless; producing no ill effects. *Rape-dust*, rape is a name for the turnip. An oil called rape-seed oil is obtained from the seed of the turnip. Rape-cake is the refuse that remains after the oil is pressed out of the bruised seed. Rape-dust is the rape-cake pulverized. *Guano*, a substance found on some parts of the South American and African coasts, which are frequented by sea-fowls. It is used as manure.]

## LITHOGRAPHY.

LITHOGRAPHY is the art of printing from stone. This process is based upon the fact that printing ink, being largely composed of oil, will not adhere to any surface which is wet with water.

Every one knows how utterly impossible it is to mix oil and water. To lithograph, then, all that is necessary, is to draw on the smooth surface of a dry stone, with a greasy crayon, whatever is desired to be printed. A weak solution of nitric acid is then rubbed over the stone, which fastens the drawing so that it can not be rubbed off. After this a solution of gum-arabic is passed over the surface, and then the stone is ready for printing.

By means of a sponge, water is now rubbed on the stone, and while yet wet the inking roller is applied. The ink, of course, adheres to the lines of the drawing, because they are oily, but to the wet stone it does not stick. The paper is now laid on, and with the stone, passed through the press; the result being a beautiful and exact copy of whatever is drawn.

Such is the process by which the lithographic prints, that are sold in all parts of our country, are made. The colored ones are painted with water paints after the printing is completed.

The stone employed for lithography is of a peculiar kind of lime and clay nature, resembling in appearance a smooth, yellow hone, yet possessing the quality of absorbing water. This stone is known as lithographic, or compact lime. It is found chiefly in Bavaria, one of the German states, though there are quarries of it in England.

The Bavarian stones, however, are those most universally employed, and their importation is a considerable object in commerce. In New York these stones are worth from five to ten cents per pound.

[*Lithog'ra-phy. Lith'o-graph.*]

### General Intelligence.

**ERUPTION OF VESUVIUS.**—About the 6th of February last, an eruption of this mountain occurred, which lasted some five days. It is said to have been the largest and most splendid eruption that has occurred for many years. A new crater has been formed, and the amount of lava, or scoria, ashes, and stones, was so great that it descended in streams down the sides of the mountain, extended some seven miles, and spread from one and a half to three miles wide.

In some places it was thirty feet high, resembling the embankments of a rail-road. It covered thirty-two houses, one or two churches, and destroyed an immense number of vineyards and farms. The direction of this stream was on the side opposite to Naples. The roaring of the mountain was such as to disturb the whole country for many miles around. In Naples the trembling of the houses was sensibly felt, and the windows shook during the eruption; yet there was but little apprehension of danger to that city.

Immense crowds went over to the other side of the bay, from Naples, to get a nearer view of the eruption; and several accidents occurred in consequence. A

young Pole was struck on the leg by a burning stone, which cut through the limb; and he died on the mountain, from loss of blood. A young American officer, son of Mr. Bayard, ex-senator of Delaware, received a blow from a falling stone, which cut his arm so that it hung suspended only by a bit of flesh. Amputation was ordered, which resulted in lock-jaw and death.

The ashes from the volcano were carried twenty miles. At night, during the eruption, the sight was truly grand and terrific, while the immense masses of rock and red-hot ashes were thrown up amid the flames.

**READING ASSOCIATION.**—The teachers of Albany, New York, have formed a reading association for mutual edification and entertainment. Among the readers we notice the names of several distinguished teachers. We rejoice that such a movement has been started, and that there is a prospect of an increased attention being given to reading by those whose business it is to teach it.

While nearly every person brought up in our country can read, scarcely one in a hundred can read well. Excellence in reading is an attainment quite as difficult as excellence in singing, yet it is of far more practical importance. Good reading is fast obtaining a much higher appreciation among the people, and it is time that teachers turned their attention to the subject with earnestness. Good readers have drawn crowded houses in New York during the past winter, with tickets for admission at *one dollar* each.

**DISCOVERY OF A GREAT LAKE.**—A great lake has been discovered in the interior of South Africa, during a journey of exploration, by two gentlemen, Murray and Oswald. It is situated in longitude 24° east, and latitude 19° south, and its limits appear to have been undiscernible. According to the natives, however, it takes twenty-five days to travel round it. The vegetation on its banks is tropical, and palms are abundant, but it contains no crocodiles, alligators, or hippopotami.

It is approached by a river, which for

some distance is of small size, and which, as it approaches the lake, becomes a large stream.

Pelicans are numerous, also fish, some of which resemble perch and carp, and weigh between forty and fifty pounds. There are likewise a great number of elephants, although of a much smaller description than those nearer the colony. The natives, whose language was unlike any known dialect spoken by the other tribes in South Africa, appeared to be of an inferior nature, and to be much afflicted with pulmonary disease.

**EDUCATION IN WISCONSIN.**—From the first annual report of the State Superintendent of Public Instruction, of Wisconsin, we learn that in 25 counties of that state, there are about 1600 school districts, and 32,147 children are reported as attending school, which is believed to be below the actual number. The whole number of children in the state, between the ages of 4 and 20, is reported to be 70,457. The city of Milwaukee is blessed with 4945 children between these ages. The average wages paid to male teachers is about \$15; to females, about \$7 per month. In the town of Southport, Racine county, male teachers receive \$40, and females, \$20 per month.

**HEAT IN THE INTERIOR OF THE EARTH.**—By the boring of Artesian wells, in the suburbs of Paris, a fact of general interest has been made known, namely; that as we go toward the center of the earth, the temperature increases at the rate of about one degree in every fifty feet.

**NEW YORK STATE NORMAL SCHOOL.**—The next term of this school commences on the 13th of May. Several Indian youth are to be admitted, and receive the benefits of the institution, for the purpose of qualifying themselves for teaching among the Indians still residing in this state.

**FREE SCHOOL LAW.**—The free school law of this state is to be re-submitted to the people at the next state election, on the question of "repeal," or "no repeal."

**REWARDS FOR SIR JOHN FRANKLIN.**—The following rewards have recently been offered by the British government for the recovery of Sir John Franklin, viz.: £20,000 to any one who will effectually relieve the crews of the ships; £10,000 for relieving, or for such information as may lead to the relief of any of the crew; and £10,000 to any one who shall first succeed in ascertaining their fate. Intelligence in regard to the expeditions which will be engaged in searching for the missing navigators, during the present season, will be duly given in our columns. The recent rumor from the Selkirk settlement of the safety of Franklin's party, is not reliable.

**LEAD ORE.**—A piece of lead ore, weighing 1500 pounds, was recently sent from Arkansas to New Orleans. The ore is said to yield 120 ounces of silver to the ton.

**GROWTH OF LONDON.**—Two hundred miles of streets have been added, during the last seven years. Villages, which a few years since were ten or twelve miles distant, are now a part of the metropolis.

**THE TELEGRAPH.**—The newspapers at Dubuque, Iowa, are able to publish the proceedings in Congress the day after their occurrence, and to issue the news by the foreign steamers twenty-four hours after they touch our coast.

**QUICK VOYAGE AROUND THE WORLD.**—The ship *Memnon*, Captain Gordon, commander, sailed from New York on the 12th of April, 1849, for San Francisco and Canton. On the 5th of April last, she arrived at this port again, with a full cargo of teas, silks, etc., having made a voyage around the world in eleven months and about twenty-six days.

**CAMELS FOR CALIFORNIA.**—Several camels have recently been imported to Baltimore, Md., which are intended for a camel train, between Independence, Mo., and San Francisco, by the way of Santa Fe. But it is not certain that these animals can endure the rigor of the climate, and the roughness of the journey in that region.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### BEGUN, BUT NOT FINISHED.

**T**HERE is a story for those who have that bad habit of beginning a piece of work, and then putting it off, day after day, without finishing it, thinking that they will find more leisure by and by, and that some other time will do just as well. But read the story, and then say how you like to see persons do as Ellen did.

"Now, my dear Ellen, bring me the nice, netted scarf which you have been preparing for your mother. How comfortable it will be to-day, as I have to ride in the storm to see your sick grandmother, especially as I am suffering from a sore throat."

"I am sorry, mother, but it is not quite finished," responded Ellen, coloring.

"Not finished, Ellen; why, you told me, three days ago, that half an hour's work would complete it; and, certainly, you have had many half hours since."

"Well, mother, I must acknowledge that the reason why I have put it off is, that there was so little to do on it, I thought I could finish it at any time."

"Well, it matters not to-day whether there is half an hour or five hours' work upon it; it is *unfinished*, and I must do without it. But, my dear child, do you expect ever to overcome your prevailing fault, that of leaving unfinished almost every thing you commence?"

Ellen made no reply, for she had been so often reprov'd for this fault, that apologies were exhausted, and she felt that her promises were of little value. This habit of leaving, in

an unfinished state, almost every thing which she commenced, was a sad drawback upon her otherwise amiable and excellent character.

She had much benevolence of feeling, and was naturally industrious and anxious to render herself useful to others; but she had not the patient perseverance to prosecute an undertaking to its full completion, especially if it was beset with some difficulties.

Thus her really active life was of little benefit to any one, and frequently vexatious disappointments were the result of this unfortunate habit. Her mother encouraged her to engage in acts of benevolence to the poor, and she was ever ready to undertake almost any work of charity; but woe to the child that depended on Miss Ellen to *complete* the garment so zealously begun; some new thing or other, more important in her estimation, always came before her, ere it was finished; besides, was not the article *almost* done, and could she not complete it at any time?

Thus the little feet went bare, because the stockings Miss Ellen had promised were *not quite finished*; and the poor, infirm grandmother went without the tidy cap, which only lacked the crimping of a border, or the appendage of a pair of ties, while, by this time, Miss Ellen was engaged in preparing a warm comfortable for another distressed family, forgetting that what she had done for poor little Joseph, and grandma P——, was of no use to them till the articles were finished and put in their possession.

Thus it was with Ellen in every thing to which she turned her attention. She was not satisfied to complete even a branch of study, and if she did, it was in so careless a manner, that she wholly lost her character as a thorough scholar.

This unfortunate habit of beginning and not finishing so many things, which, had they been completed, would have been creditable to her, and useful to others, was a source of great annoyance and anxiety to her mother, a vexation to herself, and injury to others. But I hope she overcame this bad habit, for without it she would have been loved by all.

### FLORA'S COURT.

ONCE on a time the flowers convened  
At Flora's welcome call,  
And, decked in all their charms, were seen  
In her bright banquet-hall.

Radiant with smiles, the goddess fair  
Sat on her flower-girt throne,  
And, wreathed amid her golden hair,  
The bright blue iris shone.

Amaranth and myrtle formed the wreath  
That twined around her brow,  
And the canopy she sat beneath  
Was a lordly cedar bough.

Her lips, where beauty lurked and love,  
Soft silence sealed the while;  
Each bud and flow'ret eager strove  
To catch her winning smile.

Anon she spake; nor sounds of earth  
E'er owned such golden away  
Since Orpheus' lyre, of fabled worth,  
Awoke the thrilling lay.

"Come, ask of me a boon," she said,  
"And now it shall be given,  
Whether earth's treasures, quickly fled,  
Or choicest gifts of Heaven."

Then oh, what varied gifts were sought  
By these her vassals true;  
Some chose a form with more grace fraught,  
And some a brighter hue.

The lily and the tulip fair,  
An added tint would gain,  
And the rose asked boldly, then,  
The garden's queen to reign.

But, last of all, that lowly flower  
The heart's-ease, reared its crest,  
Nor asked for beauty, grace, or power,  
To make its being best.

Meekly it craved but strength to bear  
The heat and chilly blast,  
That still it might its verdure wear  
When summer's reign was past.

On that meek flow'ret Flora smiled,  
And granted its request;  
And ever, decked with beauty mild,  
'Tis lingering autumn's guest.

Gentle youth, with the laughing eye,  
And bright and sunny hair,  
Know ye your life has an autumn nigh,  
With frosts and blighting air?

Then choose ye, like the humble flower  
Whose story I have told,  
Charms that outlive youth's fleeting hour,  
Blooming in heat and cold.

Fair science spreads a rich repast,  
And calls with winning voice;  
Go—hold her precious counsels fast,  
And at her board rejoice.

And heavenly Wisdom—let her guide  
Your feet through all the way,  
Then shall ye wear the charms that hide  
Life's dark autumnal day.

E. D. W

*Binghamton, April 9, 1850.*

### FLOWERS.

SPRING flowers, breathing their soft perfumes, touch us like the spirit of poetry. The soul is renovated while we wander among verdant hills and dales, profusely spread, from the topmost rock to the lowest marsh, with these vernal offerings. Even the infant, gamboling on the green, seizes, with rapacious grasp, the variegated blossoms, sensible of their sweet odors and beautiful hues.

E. P. H.



## CONVERSATION ON PHILOSOPHY.\*

## FIRE.

**M**OTHER, you told me, the other day, that nobody knows what *light* is, except the Great Creator. Now, can you tell me *what fire is*?

*Mother.*—I fear that you have asked another question which I can not directly answer. What fire is, is known only by its effects.

*Child.*—And what are its effects, mother?

*Mother.*—Some of its effects are as well known to you as they are to me; and I shall, in the first place, call to your recollection what you yourself know about *fire*, before I attempt to give you any further information in relation to it.

*Child.*—Why, mother, I am sure I do not know what fire is.

*Mother.*—No, my dear, I know that you do not know what fire is; neither do I, nor does any one, except the Great Creator himself. This is one of His secrets, which, in His wisdom, He reserves for Himself. But you certainly know some of the effects of fire. For instance, you know that when you have been out into the cold, you wish, on your return, to go to the fire.

Now, can you tell me what you go to the fire for?

*Child.*—Why, certainly, mother; I go to the fire to warm myself.

*Mother.*—And how does the fire warm you?

*Child.*—Why, it sends out its heat, mother; and I hold out my hands to it, and feel the heat.

*Mother.*—And where does the heat come from?

*Child.*—Why, the heat comes from the fire, mother.

*Mother.*—Then you know at least one of the effects of fire. It produces, or rather sends out, heat.

*Child.*—But does not the fire make the heat, mother?

*Mother.*—If you had a little bird, or a mouse, in a cage, and should open the door and let it out, should you say that you *made* the little bird or the mouse?

*Child.*—Say that I made them, mother? why, no; certainly not. I only let them go free. God made them. You told me that God made all things.

\* Through the politeness of Messrs. A. S. Barnes & Co., we copy this conversation, and use the cuts from *Parker's Juvenile Philosophy*, just published by them; a work designed as an introduction to "*Parker's First Lessons in Philosophy*."



*Mother.*—Neither did the fire make the heat. It only made it free, somewhat in the same manner that you would make the bird or the mouse free, by opening the door of the cage.

*Child.*—Why, mother, is heat kept in cages, like birds or mice?

*Mother.*—No, my dear, not exactly in cages, like birds and mice; but a great deal closer, in a different kind of cage.

*Child.*—Why, mother, what sort of a cage can heat be kept in?

*Mother.*—I must answer your question by asking you another, When Alice makes her fire in the kitchen, how does she make it?

*Child.*—She takes some wood, or some coal, and puts under it some pine wood, which she calls kindling, and some shavings, and then takes a match and sets the shavings on fire, and very soon the fire is made.

*Mother.*—But does she not first do something to the match.



*Child.*—Oh, yes; I forgot to say that she lights the match first, and then sets fire to the shavings with the lighted match.

*Mother.*—But how does she light the match?

*Child.*—Why, mother, have you never seen her? She rubs one end of the match on the box, where there

is a little piece of sand-paper, and that sets the match on fire.

*Mother.*—Is there any fire in the sand-paper.

*Child.*—Why, no, mother; certainly not.

*Mother.*—Is there any fire in the match, before she lighted it?

*Child.*—No, mother; if there had been, she would have had no need to light it.

*Mother.*—You see, then, that fire came when she rubbed the match against the sand-paper, and that the fire was not in the sand-paper, nor in the match.

*Child.*—Yes, mother, but I did not see where it came from.

*Mother.*—I will explain that to you, my dear, at our next conversation.

*To be continued.*

## TO MY MOTHER.

BY MONS. ABADIE.

WHEN on the dry and arid field,  
The soldier takes his weary way,  
Fainting beneath the toilsome march  
Of all the long and weary day;

How grateful to his aching sight,  
The verdant foliage of some tree,  
Through whose green branches murmureth  
A gentle music like the sea.

Dear mother! when on life's dark waste,  
Torn by each wild, fierce passion's breath,  
When nought remains but woe and tears,  
And mournful thoughts of death;

The memory of thy kindly smile,  
Of each soft, gentle tone,  
Tells me that I have still one friend—  
That I'm not all alone!

It is a waste of time to complain  
Of other people's faults. The best  
thing we can do is to mend our own.

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## For Children.

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### THE VULTURE.

BY HENRY WILSON.

**T**HE Vulture is found in the southern parts of America, in Egypt, and Arabia. It usually dwells in hot countries, amid towering mountains and rugged cliffs, which are not accessible to man ; though it frequently descends and spends much time in the plains below, in search of food.

Far removed from all intrusion, this bird retires during the brooding season. It builds no nest, but on the naked summit of the rocks lays its eggs and hatches its young.

There are about ten species of birds belonging to the Vulture family ; but as they all so nearly resemble each other in their habits, a general description of one will give a good idea of all. They vary somewhat in size and color in different countries, but are usually about four feet in length, and of a brown color, verging toward a black. The wings, when spread, are nearly nine feet in extent, and the bird will weigh about twelve pounds.

The Vulture is an ugly and a filthy bird. Lambs, kids, and sometimes small children, are carried away and devoured by them. Some of the species live only on the bodies of dead animals, and never molest any thing alive. Others feed upon reptiles, and are particularly fond of snakes. This bird is endowed with a remarkable power of scenting its food.

In Egypt, and other Eastern countries, they are deemed so useful, that no person is allowed to kill them, under the penalty of a fine. They are thus protected and valued for the good they do in the streets of towns and cities.

The Vulture is the crocodile's enemy. In South America, this animal grows to an enormous size, and is so ferocious as to attack land animals that come within its reach. Even man frequently falls its victim. But the Vulture prevents them from increasing rapidly in numbers, by destroying its eggs.

Each female crocodile lays from one to two hundred eggs every year. These are about the size of a goose egg. Were it not for the Vulture, these animals might become so numerous as to render it almost impossible for man to inhabit the country where they are found.

The crocodiles are very cautious, and use every means in their power to secrete their eggs, so that no other animal shall find them. They come on the land, lay their eggs in the sand, and carefully cover them up, where they are left to be hatched by the heat of the sun.

The Vultures seem to understand this; and perched on some tall tree, or towering cliff, they watch for these animals to come out of the water and deposit their eggs. No sooner has the crocodile returned to his element, than these voracious birds utter loud screams, as if to call all to share the feast; and then together they pour down upon the nest, and soon devour every egg.

Thus we see that, notwithstanding these are such filthy birds, and have such a disgusting appetite, yet they answer a valuable purpose. They are the scavengers of the world. It is an interesting fact, and one showing the wisdom of the Creator, that the destructive and ferocious birds are but few in number, and limited to certain portions of the earth; while the most useful and harmless birds exist in abundance.

Were Vultures as numerous as pigeons or swallows, they would soon devour all the animals upon the earth; and even man would hardly be able to defend himself against their attacks.

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[*Kid*, a young goat. *Reptiles*, animals that creep on the ground. *Voracious*, very greedy; eating with a ravenous appetite. *Scavengers*, cleaners of streets; those who remove filth.]

## LESSONS IN BOTANY, No. 1.

### LEAVES.

BY FLORA MILFORD.

**T**ILL within a few years, botany has not received the attention its importance demands. Its use as a science is very evident, and there is no study which awakens in the mind purer or more pleasurable emotions than this, and certainly none which leads us more directly to a contemplation of the wisdom and benevolence of the Framers of the universe.

All nature is now being clothed in new robes; tree and shrub are decked fresh from the Creator's hand; and, in admiring the general beauty of the present season, it may be profitable to consider more attentively the delicate mechanism of the vegetable world. In so doing, leaves will first attract our attention.

Nearly all plants are supplied with leaves; but there is a great difference in their size, form, color, and situation. They are very large in the torrid zone and are there used for various purposes. They serve for umbrellas, fans, and for covering houses. In the temperate zones they are of the medium size, and in the frigid extremely small.

Leaves are seminal, primordial, and characteristic. The seminal leaves are those which appear first after planting, as in the bean and the morning-glory, and are shaped very differently from the others. The primordial leaves succeed the former, and prepare the way for the characteristic, or proper leaves. After the proper leaves are developed, the seminal leaves wither and decay. In some plants, however, the latter are entirely wanting.

Leaves are named from objects which they resemble in form. The

leaves of grass and most of the grains are *linear*, or narrow, with parallel sides; those of the peach, summer-savory, and spider-wort, *lanceolate*; *reniform*, or kidney-shaped, as in the glechoma; *cordate*, or heart-shaped, in the morning-glory, the four-o'clock, wild violet, and many others; *orbicular* in the nasturtion; *sinnate*, with divisions and indentations in the sides, as the maple and the oak; *sagittate*, or arrow-shaped, in the sorrel; *ternate*, when the leaves grow in threes; some leaves are *ovate*, or egg-shaped.

as the horse-chestnut, and the cinquefoil, or five-finger, a creeping plant, growing on poor land.



LOBED.



PALMATE.



DIGITATE.

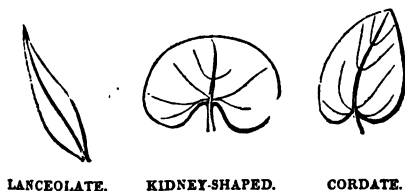


SERRATE.

When notched at the edge, they are called *serrate*; *crenate* when scalloped; *ciliate* when fringed with hairs; *glabrous* when sleek and smooth; and *glaucous* when covered with a light green substance. Many leaves comprise several of these characteristics. The peach is lanceolate, serrate, acuminate, and glabrous. The catnip is cordate, serrate, and *pubescent*, or downy. The chestnut, lance-ovate, serrate, and acuminate.

In a few instances leaves are white, as the Indian pipe; but generally they are green, in all its various shades. In this we can behold an instance of the perfect harmony of created things; for there is no color so agreeable to our eyes as green—the very color with which the Creator has seen fit to clothe the vegetable world.

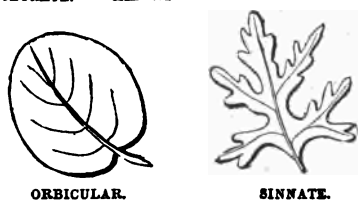
The upper and under surfaces of leaves vary much as to color; the former being darker than the latter. It is a fact worthy of notice, that trees which grow on high, dry land have darker leaves than those which grow in swamps. Thus, the oak, the chestnut, and the sugar-maple, have leaves of a dark green, while those of the ash, the willow, and the soft-maple, are of a lighter color.



LANCEOLATE.

KIDNEY-SHAPED.

CORDATE.



ORBICULAR.

SINNATE.



TERNATE.

OVATE.

The trellium is a beautiful example of the ternate leaf; it is *rhomboid*, and *acuminate*, or turned at the point.

Leaves are said to be *lobed*, when they are divided. The hepatica, or liver-leaf, is a good example, and may be found half buried in dead leaves. They are *palmate* when oblong segments extend from a space in the center of the leaf, as the castor-oil plant, the rhubarb, and passion-flower. They are *digitate* when the segments proceed directly from the petiole, or stem;

The upper surface is smooth, and lubricated in such a manner as to repel moisture, too much of which would be injurious. Drops may be seen on the under surface, while the upper is dry, as in the cabbage.

Leaves are but an extension of the bark of the plant, and by presenting a greater surface to the action of the air, light, and heat, perform a very important part in the economy of the plant.

From the petiole proceed veins, or small stems, through the leaf, each dividing and subdividing, till the leaf has the appearance of net-work. This skeleton, or frame-work, may be obtained by macerating the leaf in water, or from wet places in which the leaves of the preceding season have fallen. Silk-worms dissect leaves very neatly, leaving all these veins untouched.

This frame-work of the leaf is called the vascular system, meaning, as the name imports, full of vessels. The veins are transparent and tubular, as has been proved by immersing the end of the petiole in a colored liquid, and are very analogous to the circulatory vessels of the human frame.

Filling up the spaces in the vascular net-work, is the cellular texture. This is composed of cells, in some instances so exceedingly minute as to require the highest power of the microscope to be distinguishable. It is more or less soft and pulpy, and the leaves vary in appearance accordingly. It predominates in the ice-plant, the dew-plant, the common live-for-ever, and the houseleek, giving them their soft, fleshy appearance.

When the cellular texture occupies the plane of the vascular, the leaf is smooth, as in the beech and chestnut; when it is more amply developed, the leaf is *rugose*, or wrinkled, as in the dock and the sage.

Covering the leaf is the *cuticle*, or

skin, which is filled with innumerable pores called *stomas*. We now come to the use of leaves in aiding the growth of plants. Carbon forms the principal element of the vegetable world; but as this is a solid substance, it enters into the plant only in the form of gas. United with the oxygen of the air, it forms carbonic acid gas, a substance of a poisonous nature expired by animals, and which, if unconsumed, would soon deteriorate the atmosphere to a great extent.

Plants absorb *carbonic acid gas*, which, by the chemical action of light, is decomposed, the oxygen being thrown off to vivify the atmosphere, the carbon retained to become the stem of the lily or the mighty oak of the forest.

A beautiful instance of this chemical change may be observed in the houseleek. Very early in the morning its thick leaves have quite an acid taste; but as the day advances, they lose this and acquire a sweetish, insipid taste. Oxygen is the great acidifying principle, and it is the predominance of carbon which causes the saccharine of plants.

Plants which grow in the dark, are slender, pale, watery, and deficient in carbon; instances of which may be seen in potato vines which chance to grow in a cellar, and in beets, turnips, and the like, which are buried during the winter, as is the custom with many.

Another fact worthy of notice, is the tendency of plants to seek the light. This may be observed in all plants, and it is a fact well known to those who cultivate house-flowers, that they require to be turned frequently, that they may grow straight. Some ascribe this to vital energy; but this is rather a vague reason, as we know not in what this vital energy consists. Perhaps the chemical agency of light is the cause.

## THE BISHOP AND THE BIRDS.

**A** BISHOP, who had for his arms two fieldfares, with the motto, "Are not two sparrows sold for a farthing?" thus explained the matter to an intimate friend:

Fifty or sixty years ago, a little boy resided at a village near Dillengen, on the banks of the Danube. His parents were very poor, and almost as soon as the boy could walk he was sent into the woods to pick up some sticks for fuel. When he grew older, his father taught him to pick the juniper-berries, and carry them to a neighboring distiller, who wanted them for making Hollands.

Day by day the poor boy went to his task, and on his road he passed the open windows of the village school, where he saw the schoolmaster teaching a number of boys of about the same age as himself. He looked at these boys with feelings of envy, so earnestly did he long to be among them. He was quite aware it was in vain to ask his father to send him to school, for he knew that his parents had no money to pay the schoolmaster; and he often passed the whole day thinking, while he was gathering the juniper-berries, what he could possibly do to please the schoolmaster, in the hope of getting some lessons.

One day, when he was walking sadly along, he saw two of the boys belonging to the school, trying to set a bird-trap, and he asked one what it was for? The boy told him that the schoolmaster was very fond of fieldfares, and that they were setting a trap to catch some. This delighted the poor boy, for he recollected that he had often seen a great number of these birds in the juniper-wood, where they came to eat the berries, and he had no doubt but he could catch some.

The next day the little boy borrowed an old basket of his mother, and when he went to the wood he had the great delight to catch two fieldfares. He then put them in the basket, and tying an old handkerchief over it, he took them to the schoolmaster's house. Just as he arrived at the door, he saw the two little boys who had been setting the trap, and with some alarm he asked them if they had caught any birds? They answered in the negative; and the boy, his heart beating with joy, gained admittance into the schoolmaster's presence. In a few words he told how he had seen the boys setting the trap, and how he had caught the birds to bring them as a present to the master.

"A present, my good boy!" cried the schoolmaster; "you do not look as if you could afford to make presents. Tell me your price, and I will pay it to you, and thank you besides."

"I would rather give them to you, sir, if you please," said the boy.

The schoolmaster looked at the boy who stood before him, with bare head and feet, and ragged trousers that reached only half-way down his naked legs.

"You are a very singular boy," said he, "but if you will not take money, you must tell me what I can do for you, as I can not accept your present without doing something for it in return. Is there any thing I can do for you?"

"Oh yes!" said the boy, trembling with delight; "you can do for me what I should like better than any thing else."

"What is that?" asked the schoolmaster, smiling.

"Teach me to read," cried the boy, falling on his knees; "oh, dear, kind sir, teach me to read!"

The schoolmaster complied. The boy came to him at all leisure hours,

and learned so rapidly that the teacher recommended him to a nobleman residing in the neighborhood. This gentleman, who was as noble in mind as in birth, patronized the poor boy, and sent him to school at Ratisbon. The boy profited by his opportunities; and when he rose, as he soon did, to wealth and honors, he adopted two fieldfares as his arms.

"What do you mean?" cried the bishop's friend.

"I mean," returned the bishop, with a smile, "that the poor boy was MYSELF."—*Selected.*

### ADAM AND THE CHERUB OF PARADISE.

Translated from the German of Krumacher,

BY ELIZA A. CHASE.

**A**S Abel lay in his blood, and Adam stood by the slain and wept, there came a cherub from paradise, to the father of mankind, and placed himself silently before him; and his countenance was sad. Adam raised his face and said, "Is this a picture of the race that is to spring from me? And shall brother's blood, shed by a brother's hand, ever stain the earth again?"

The cherub answered, "Thou sayest it."

"Alas! with what name, then, shall we call the horrid deed?" asked Adam.

With a tear in his eye, the celestial answered, "War!"

Then the father of mankind shuddered, sighed, and said, "And why must the good and righteous fall by the hands of the unrighteous?"

The cherub was silent.

But Adam continued in his complaint, and exclaimed, "What remains to me now, in my grief, but the blood-stained earth?"

The cherub answered and said, "The look toward heaven." Then he vanished.

But Adam stood until the sun went down. And as the stars appeared on high, he lifted his arms toward Orion and the Wagon, and cried, "O ye glistening watchmen on the gates of heaven! why wander ye so silently? If it be permitted to a mortal to hear your voice, O tell me of the land that is beyond, and of Abel, my beloved!"

There was silence all around, and Adam fell on his face, and adored. And he heard in his heart these words, "Behold, Abel thy son lives!"

Then he went trusting away, and his soul was calm, and full of wisdom.

[*Cherub*, a celestial spirit; an angel. *Paradise*, a place of bliss; heaven. *Orion*, one of the southern constellations; a cluster of stars. *Wagon*, here also refers to a cluster of stars called Wagon.]

### A RAT STORY.

WALTER COLTON, in his diary of a voyage to California, entitled "Deck and Port," relates the following capital rat story:

"I have always felt some regard for a rat since my cruise in the Constellation. We were fitting for sea at Norfolk, and taking in water and provisions; a plank was resting on the sill of one of the ports which communicated with the wharf. On a bright moonlight evening, we discovered two rats on the plank coming into the ship. The foremost was leading the other by a straw, which he held in his mouth.

We managed to capture them both, and found to our surprise, the one led by the other was stone blind. His faithful friend was trying to get him on board, where he would have comfortable quarters during a three years' cruise. We felt no disposition to kill either, and landed them on the wharf. How many there are in this world to whom the fidelity of that rat may teach a lesson?"

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### JAMES AND THE SHEEP.

ONE day in May, James went out in the field to feed the sheep some salt. He lived on a farm, and his pa had a great ma-ny sheep.

When James came near them and be-gan to call, they saw that he had a dish in his hand, and ran to him.

Sheep are fond of salt. When it is put on the clean grass, they will bite the grass off close to the ground, to get all the salt.

When James called the sheep the lit-tle lambs came up, too ; but they had not learned to love salt, as well as the old sheep.

While the old sheep were eating the salt which James gave them, the lambs were at play.

And as soon as James had fed the sheep all the salt he had in his dish, he sat down on a large stone, to see the lambs skip and play.

His dog Ring went with him to the field, and when James sat down, his dog came and sat down by him.

Ring was a good and kind dog, and would not harm the sheep or lambs.

There was a knoll not far from where James sat, and on this the lambs would climb un-til it was full ; then they would jump a-bout, run down, and skip a-round it.

Then all would climb on the knoll a-gain, and then jump and run down once more.

It was fun for James to see the lit-tle lambs play. And then they all seemed so hap-py ! James used to say, " Hap-py as a lamb."

When James was eight years of age, his pa gave him a sheep, be-cause he was so kind to them.

His pa got some red paint and made the let-ters J. L. B. on the side of James's sheep. These stood for James L. Brown, which was this good boy's name.

James could tell his sheep when it was with a large flock, as soon as he could see the let-ters J. L. B. on its side.

He taught his sheep to eat salt from his hand. Then it would come to him as soon as he called it.

When James calls his sheep



it will say "Bah, bah," and run to him.

James is a kind and good boy. He goes to school near his home; and all the boys love him.

He is now but nine years of age, yet he can read as well as most boys that are twelve years old. He learns so well because he tries to learn.

One day some boys asked him to stay a-way from school, and join them in play; but he said, "No; my pa and ma wish me to go to school, and I shall not dis-please them by stay-ing a-way."

#### AUNT ELIZA'S STORIES,—No. 1.

##### LITTLE EMMA.

**E**MMMA CLIFTON was a little girl who had always lived in the city, and therefore knew but little of the pretty and curious things that are seen in the country.

Her father was not a rich man, and as he had to work for a living he had but little time to take his children from home.

Emma was so used to the things of the city that they did not seem curious to her at all; and as she was a talkative little body, always asking how or why things were so, her mother told

her she would send her into the country to live a while, where she could see for herself the things she so much wanted to know about.

At this Emma danced around the room, and tossed her curls all over her face, exclaiming, "Thank you, dear mother, thank you. When I come back I'll tell you all the strange things I see, and when I become older I will write you a book about the country."

Her mother smiled and said, "I hope you will be pleased with your visit, my dear, but I would not write a book yet." Emma was reading a little book on birds, so she thought she could write one too.

The next day her Uncle Edward and Aunt Mary came to her father's, and she prepared to go home with them.

She had never been out of sight of the city before; and when she looked around and saw only green fields and scattered houses, she was very much surprised, and said, "Why, Aunt Mary, I thought people lived in the country; but here are not houses enough for them. Will the poor children have to sleep in the street?"

It soon became dark, but Emma's tongue ran as fast as

ever. They were passing a little wood, where the pretty fire-flies were flashing out, and the little girl asked what they were. When told they were fire-flies, she said, "Are they going to have fire-works to-night? See, uncle, see! They are little rockets."

In the morning she went with her cousins, Albert and Ellen, to the pasture. There were cattle and calves, sheep with their playful lambs, and colts. Emma asked, "Does uncle Edward keep a menagerie?"

The cousins could hardly help smiling at this question, but they knew little Emma was only six years old, and had never been in the country before.

They soon found a flower with a bee on it. Emma put her finger on the bee, saying, "Pretty fly, pretty fly;" but she soon drew it back, crying out, "Oh, the fly has bit me! What sharp teeth it must have!" Her aunt put some hartshorn on her finger, which soon eased the pain.

Pretty soon they found a grasshopper. "See, cousin Ellen, see," cried Emma, "here is a little kangaroo; see him jump. But he does not look much like the one in my book; I guess it is because he is so small."

Her cousin told her what it

was; and she said, "Oh, Ellen, there are so many things I do not know!" "Never mind, Emma, dear, I will teach you," said Ellen.

Then they went to see the men cut grain, and Emma was much pleased, and said, "Oh, what a funny knife, and what a queer handle." Albert told her that was a cradle. "A cradle," said Emma, "and do they call it a cradle because they rock the wheat in it before they throw it out?"

And thus it was with every thing that Emma saw. She had so many questions to ask, and though she was very ignorant of country life, her cousins did not laugh at her, but tried to teach her all they could.

When she went home again, they went with her to see the strange things in the city; but Emma told them the flies did not make the fire-works there, and there was no wheat to be cradled, but she would show them all the nice things she could.

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WELL, my little boy, you have been to school to-day; now can you tell me what you learned, that you did not know this morning?

## A KISS FOR A BLOW.

THE following is a beautiful incident, illustrating the happy effects of "A kiss for a blow." How pleasant it would be to see children always thus return love for anger.

One day a minister went into an infant school in Boston. He had been there before, and had told the children they might ask him any question that they pleased, whenever he came to see them.

"Please to tell us," said a little boy, "what is meant by *overcoming evil with good*?" The minister began to explain it, when a little incident occurred which gave him a striking illustration.

A boy, about seven years of age, was sitting beside his little sister, who was only six years old. As the minister was talking, George, for that was the boy's name, got angry with his sister about something, doubled up his fist, and struck her on the head.

The little girl was just going to strike him back again, when the teacher seeing it, said, "My dear Mary, you had better kiss your brother. See how angry and unhappy he looks!"

Mary looked at her brother.

He looked sullen and wretched. Her resentment was soon gone, and love for her brother returned to her heart. She threw both her arms about his neck and kissed him.

The poor boy was wholly unprepared for such a kind return for his blow. He could not stand before the generous affection of his sister. His feelings were touched, and he burst out crying.

His gentle sister took the corner of her apron, and wiped away his tears, and sought to comfort him by saying, with endearing sweetness and generous affection, "Don't cry, George; you did not hurt me much." But he only wept the more. No wonder; it was enough to make any body weep.

But why did George weep? Poor little fellow! Would he have wept if his sister had struck him as he had struck her? Not he. But by kissing him as she did, she made him feel more acutely than if she had beaten him black and blue.

Here was a *kiss for a blow*, love for anger, and all the school saw at once what was meant by "*overcoming evil with good*."

NEVER stop to play when on your way to school.

## UNCLE ROLLO'S ADVICE.

## ABOUT THE MOUTH.

**G**OME, Henry, and William, and Susan, and Anna, I wish to talk with you about the mouth. Can you tell me what it is made for?

*Children.*—O, yes; it is made to eat and speak with.

That is right; and you see it is a very useful thing, and that we could not well do without it. But the mouth, like every thing else, needs to be taken care of.

Sometimes the mouth will pout, and make a child look very disagreeable. Sometimes it will eat too fast, and get too much in it at a time.

Now, children, never let your mouth do any such things as these. They are both very unbecoming habits.

There is another very curious thing about the mouth, that is, it laughs. Now, dogs, and cats, and pigs, and hens, and geese, and sheep, and cows, never laugh.

But children laugh; and old people, too, sometimes. And it is well enough to laugh at proper times. I love to see children laugh when at play; and I love to see them laugh when I tell them a funny story.

But I never like to see any one laugh at the misfortune of another. Now, children, did your mouth ever laugh at any person because he was poor, or because he was poorly dressed?

Did your mouth ever laugh at any one because he fell down and hurt himself?

If it did, it laughed at others misfortunes, which it should not do. Now, if your mouth has ever done any of these things, take uncle Rollo's advice, and teach it better manners.

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 LOOK UP.

A LITTLE boy went to sea to learn to be a sailor. One day his father said to him, "Come, my boy, you will never be a sailor if you don't learn to climb; let me see you go up the mast."

The boy, who was a nimble little fellow, soon reached the top; but when he saw at what height he was, he began to be frightened, and called out, "Oh, father, I shall fall; I am sure I shall fall; what am I to do?"

"Look up, look up, my boy," said his father. "If you look down you will be giddy, but if you keep looking up you will descend safely." The boy followed his father's advice, and reached the bottom with ease.

## Phonography.














## LESSON I.

## THE PHONOGRAPHIC ALPHABET.

## VOWELS.

LONG.			SHORT.		
E	•	eel	i		ill
A	•	ale	e		ell
AH		bar	a		am
AU		all	o		odd
O		note	u		up
OO		fool	oo		wood

## CONSONANTS.

MUTES.			SEMI-VOICALS.					
P		rope	F		safe			
B		robe	V		save			
T		fate	TH	(	thin			
D		fade	TH	(	there			
CH		chest	S	)	hiss			
J		jest	Z	)	his			
K	—	leek	SH		should			
G	—	league	ZH		azure			
LINGUALS.								
R		for	L		fall			
NASALS.								
M		seem	N		seen	NG		sing





It will be observed by the preceding alphabet, that the vowel sounds are represented by *dots* and *dashes*; and the consonants by *straight lines* and *curves*. These characters are arranged in pairs; one light and the other heavy. The light characters represent the light or whispered sounds, and the heavy characters represent those which are heavy or spoken.


The first columns, under the divisions, *long* and *short* vowels, show the letters which are represented by the *dots* and *dashes* in the second columns. The letters in *italic*, found in the third columns, when pronounced in those words, show




the sounds represented by these *dots* and *dashes*. The *straight lines* and *curves*, under the head of consonants, represent the letters standing before these several characters; and the *italic letters*, in the words following the characters, represent the sounds of those consonants.

In writing phonography, the perpendicular and inclined consonants are made from top to bottom, with the exception of *l*, which is struck upward from bottom to top. An exception to this rule will be noticed in a future lesson. The horizontals are made from left to right. The necessity of strictly observing these directions by the beginner, may be seen from the position of the vowels. The *vowels* are placed to the consonants in *three positions*, viz.: when placed at the beginning of the consonant they are in the *first position*; when at the middle they are in the *second position*; and when at the end of a consonant they are in the *third position*.

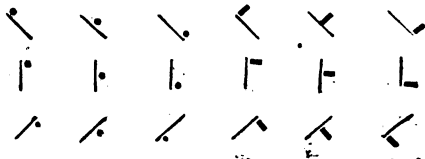
The *heavy dot*, when in the *first position*, represents the sound of *e* in *eel*; in the *second position* it represents the sound of *a* in *ale*; in the *third position* it represents the sound of *ah*, as in *bar*. The *heavy dash*, in the *first position*, represents the sound of *au*, as in *all*; in the *second position* it represents the sound of *o* in *note*; in the *third position* it represents the sound of *oo* in *fool*.

When reading phonography, if the vowel is on the left hand side, or above the consonant, it is read first; but when it is on the right hand, or below, it is read after it, thus:  eat;  tea;  aim;  nay.

Phonographic characters should not be written smaller than they are here, and much care must be taken at the commencement to trace them slowly and accurately. Rapidity can soon be added to accuracy by practice. It will be best for the learner to write on ruled paper. Either a pen or a pencil may be used. All the consonants, when standing alone, should rest upon the line. The words should be strictly analyzed by sounds, and the spelling done by sounds only, and not by naming the letters; thus:  d . . . a, day.

The learner may now read and write in phonography, and in full all the words in the following lesson; thus:  pea;  pay;  pa.

## VOWELS PRECEDING CONSONANTS.



## MAY SONG.

ALTERED BY W. B. BRADBURY, FROM J. A. P. SCHULTZ.

Very Quick.

1. { O, the love - ly month of May, } When by vale and moun - tain,  
Ev - er wel - come, ev - er gay!

When by brook and foun - tain, { Flow'r - ets bloom and in - sects play,  
In the love - ly month of May.

O, the love - ly month of May, } Ev - er wel - come, Ev - er welcome and  
Ev - er wel - come, ev - er gay,

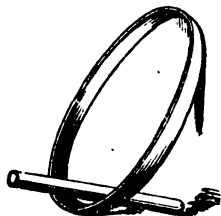
gay - - - welcome and ev - er - -  
ev - er gay, Ev - er wel - come, ev - er gay!

gay, ever welcome and gay.

2. O how fresh the morning air!  
O how lovely all things are!  
Birds so gayly singing;  
Woods and meadows ringing;  
Buds and blossoms fresh and bright;  
Leaves so green, enchanting sight.  
O, the lovely, &c.

3. Hark! the universal shout!  
Nature's fairest forms are out!  
Lambs are bleating, skipping;  
Bees are buzzing, sipping;  
Walk, or ride, or row the boat,  
Stand, or fall, or sink, or float.  
O, the lovely, &c.

## Drawing Department.



Hoop.



Bottle.



Head.

As many who will receive this number of *The Student* may not have heard of our plan of exchanges in drawings, paintings, mappings, and compositions, we give the following explanation, and directions for those who wish to engage in it.

Specimens of drawing, painting, and mapping, are prepared by the pupils of schools, on pieces of drawing paper, varying in size, from a visiting card to that of a common letter envelope. These may be copies of the cuts which are published in our drawing department, or of drawing cards or maps, or drawn from nature. On the backs or margins of these are written the names and ages of the pupils who drew or painted the specimens; also the name of the teacher and school, and of the place where the school is located, in this manner:

*From Hobart Seminary, Hobart, N. Y.*

*Mr. F. L. Hanford, Principal.*

*By Charlotte E. Foote, aged 13.*

These drawings are then to be placed in the hands of the teacher, who should copy, on a slip of paper, the names and ages of all his pupils that send us their specimens, and inclose this list of names in a letter envelope with the drawings, as it will save us much labor, and then send them to *The Student*, 131 Nassau St. New York. The *Postage must be paid*, in all cases. This may be done by each pupil that sends drawings paying one cent; thus ten or twenty pupils may each send us drawings in the same envelope at the trifling cost of one cent each, for postage.

But what is to be obtained by all this labor? We will answer. First; these drawings are noticed in *The Student*, by printing the name and age of the pupils, and of the schools which they attend, as may be seen in this number. Then, once a month, we select a few specimens from each of the packages which have been received from different schools, and send them, usually at the time of mailing *The Student*, to each school that has sent us drawings. By this means a school sending us specimens may receive some in exchange from perhaps a dozen or twenty other schools. This enables these pupils to compare their own efforts with those of pupils in other sections of the country. These drawings serve, too, as drawing cards, which may be copied and again sent out as exchanges.

Sometimes a teacher is desirous of introducing

drawing into his school, and sends to us for specimens from others as a means of awakening an interest on the subject in the minds of his own pupils. We most cheerfully send him of such as we chance to have on hand; these accomplish their work, and copies of them return to be again sent out as pioneers, or to some who had previously engaged in contributing for exchanges.

Some schools send us drawings regularly, every month; others send only once in two or three months. Many of the specimens received are well executed, while others, from beginners, are but first attempts. These are scattered east, west, north, and south. Some have already traveled far away, and been viewed by children in Texas, as specimens of what the pupils in the state of New York are doing with the pen and pencil. Others have been distributed among children in Iowa, to induce the little fingers there to engage in this interesting exercise. And it has not been seed sown in vain, for drawings from those distant forest-homes have returned to New York in response.

Many schools situated in and near the city send us their drawings by some person who will call and leave them at our office and receive others in return. Though many have already engaged in this plan of exchanges, we wish many other schools to contribute specimens; there is room for all. If so many send that we can not print the names of the pupils, we will give the name of the school and teacher. What schools shall we enter on our exchange list? Who will respond?

The following are the names of pupils who sent us specimens of drawing and mapping, a few days since, from Mr. J. M. Horton's school, North Castle, Westchester Co., N. Y.

Mary Purdy, aged 15, sent us 10 specimens; Frances Brundage, 12, sent 5; Sarah E. Rabbins, 14, sent 2; Deborah L. Green, 13, sent 2; Mariett Fisher, 13, sent 2; Jane Whitney, 12, sent 3; Sarah A. Merritt, 11, sent 3; Maria L. Capron, 12, sent 5; Mariett Brundage, 11, sent 1; Phebe F. Fisher, 10, sent 2; Frelove B. Green, 11, sent 1; Elma Williams, 8, sent 1; S. W. M. Chat-taway, 7, sent 2; C. C. Odell, 10, one specimen; Jeremiah R. Allen, 12, one; Evander Purdy, 11, one; Elijah C. Fisher, 15, three; Reuben Will-

iams, 12, four; Lewis S. Onderdunk, 13, five; John Hoodless, 15, six.

The specimens from these pupils are well executed, and among the best that we receive. Much praise is due them for their perseverance in drawing. They were among the very first that engaged in contributing for exchanges; and they have continued it regularly for nearly two years.

Mr. Abram Debaun recently favored us with another package of drawings from his pupils at Schraalenburg, N. J. We are glad to see that these pupils have made much improvement in drawing.

From the pupils of Miss Harriet M. Perkins, Utica, N. Y. Augusta Devos, age 13; Sophia Baker, 13; Frances Macumber, 12; A. Elizabeth Davies, 12; Sarah A. Brown, 13; Susan Gilmore, 12; Hester A. Bigsby, 14; Margaret Allen, 13. The drawings, by these pupils, were all maps. Let us hear from you again; we will send you drawings in exchange.

From the pupils of Mr. M. D. Loper, Shelter Island, Suffolk Co., N. Y., we have recently received a few maps. Jonas B. Bowditch, age 13; William Tindall, 15; Margaret C. Case, 14.

The pupils attending Miss Eliza A. Chase's school, Orangetown, N. Y., have recently sent us a package of good drawings. These pupils have made much improvement since sending us their first package of specimens. Margaret Blauvelt, aged 15; Maria T. Demarest, 14; Jane Maria Post, 13; Sarah M. Cooper, 11; Cornelius J. Blauvelt, 12; Jefferson Cooper, 14; William S. Van Houton, 11; Margaret Campbell, 9; Mary E. Cooper, 6; Mary sent us a specimen of worsted work.

## Editor's Table.

### TO OUR PATRONS.

THE STUDENT has been published three years and a half, and we now present our readers with the first number of a new series. To our former patrons it is needless to tell the object of the work, or even to describe it in its new dress—it speaks for itself; yet it is due to those who have not heretofore been acquainted with it, that we should now briefly allude to its object, and notice some of its features.

The Student is intended, as its title indicates, for a *Monthly School-Reader* as well as a Family Miscellany. Great pains are taken to adapt it to the wants of the various classes in the school-room; and judging from the approbation it has received from teachers who have thoroughly tested its utility, it has made at least an approximation toward its object—which is to awaken and keep constantly alive an interest in reading, by presenting new, attractive, and highly instructive articles each month.

It is a fact universally acknowledged by teachers, that children become tired of old reading-books, consequently, during the reading exercises, are often listless and dull. Their lessons have been read over and over again, till they no long-

er awaken any interest. Give them a new book, and all is life and attention; the hour for reading is then hailed with pleasure.

It is this principle in the mind of the child, which makes THE STUDENT such a welcome visitor by so many thousand bright and smiling faces in the schools throughout our country. And it is because children are so much interested in reading that which will teach them something new, that those who have adopted this plan, say, "I never knew so great an interest in my reading classes, nor such rapid improvement before."

By an examination of this number, it will be seen that it is arranged for three classes in schools, besides the music, drawing, phonography, and the page for teachers. Those pages designed for the youngest readers, are suited to their capacities, and printed on large, plain type. That portion for the classes more advanced, is printed on smaller type; and the several departments are adapted to readers of all ages.

The representation and description of the COATS OF ARMS, or PUBLIC SEALS of the States, accompanied with brief historical facts, will be continued in each number. This must prove a valuable feature, inasmuch as it will present information which comparatively few will be able to find elsewhere.

Heretofore it has been customary to insert "For the Student," over most of the original articles published in our columns, which were not written by either of the editors. It has probably been owing, in some degree to this, that several of our exchange papers have copied our original articles without giving any one credit for them. Hereafter, all articles in THE STUDENT may be considered as original, and written for it, unless credited, or otherwise introduced.

From this number a good idea may be obtained of what will be the plan and general arrangement of the work. We shall endeavor to present an interesting variety each month, and to send forth THE STUDENT richly laden with good. To you, kind patrons, we cheerfully submit it, hoping it may merit your approbation, and secure your prompt co-operation.

NOTICE.—The present number of The Student will be sent to our subscribers whose term of subscription has already expired, and to some who may not have received it before. We hope those who thus receive it may be sufficiently well pleased with the work to become subscribers.

Teachers, and Town-Superintendents are particularly requested to act as agents.

MUSICAL GEMS, for *School and Home*, is a recent work of juvenile music, by WM. B. BRADBURY. Published by Mark H. Newman & Co., New York. The "May Song" in this number is from that work.

TO CORRESPONDENTS.—Those who favor us with communications for The Student, will please to forward them before the *tenth* of the month preceding the date of the number for which they are intended. Articles for our June number should be received by us as soon as the 10th inst.



## PRACTICAL HINTS TO TEACHERS.

## MANAGEMENT OF SCHOOLS.

THE following suggestions have been prepared with the view of furnishing hints to teachers who are about commencing, or have already entered, schools for the summer term. In the small space that we have allotted to this class of our readers, it will not be expected that complete essays on teaching, or educational topics, should be given; indeed, we do not desire it. Our aim is to give brief, practical hints, which will suggest to active-minded teachers, more than the long delineations that only a few *find time* (?) to read.

Let your first aim be to make your school pleasant and attractive. A cheerful countenance and kind words will do much. There are flowers of all kinds up the hill of science; find these flowers, and point them out to your pupils, and you may make your school the most agreeable place in the world for children. Accomplish this, and you have the secret of securing a regular and punctual attendance.

For young children, every thing should be *short and simple*. *Short sessions; short lessons; short recitations*; and every thing short, *save recesses*. These may be long; for children soon get tired of restraint. Too long confinement is injurious. Interest them by showing things, and talking about things. Cause them to think and exercise their senses. Ask them many questions, and allow them to question you.

By all means have *order*. Order in studies and recitations; order in going to and from classes; order in entering and leaving the schoolroom. Teach the children to observe order in putting away their hats, bonnets, shawls, and in the care of their books and desks. The best schools, like the best machinery, move on with little noise. The most important *practical* direction in establishing and maintaining good order is, *Do not make much noise yourself*. A bustling, noisy teacher will make a bustling, noisy school. But do not make *order and silence* the end; they should be the *means* in education. Bees when most busily at work, generally buzz a little, so do boys. Let the *little* noise made be the *hum of business*, and not the *buzz of confusion*.

EMPLOYMENT is the great secret of maintaining order among children. It prevents mischief, relieves tedium, renders the schoolroom attractive to them. But this must be interesting employment. The use of slates and simple drawings is one of the means of furnishing it.

Interest your pupils in their studies. If you try to teach children who are not interested, it is like a blacksmith trying to make nails out of cold iron. There is too much hammering of cold iron in our schools; too much *hard* work, that does little good, because not rightly employed. Let all lessons be *well learned*, and then *review* often. Ask interesting questions—questions not found in the book, and thus wake up ideas, and make dull eyes bright by developing thought.

In hearing recitations, do not talk too much yourself. Let the *pupils* do most of the talking. Do not ask what the lawyers call leading questions, which may be answered by yes or no. Some teachers talk of *carrying* a class through a book; this must be the way they do it, by asking leading questions. Children are not apt to go

alone as long as they can be carried. Few scholars will take the trouble to get their lessons *thoroughly* while they are sure that the teacher will so multiply and arrange his questions as to *suggest* what the answers should be.

We do not object to explanations on the part of the teacher. He should, by all means, fully and clearly explain every thing not perfectly understood by the pupil; but we *do* object to the teacher doing *all* the work, and leaving the mind of his pupil in a passive state, to receive whatever he sees fit to pour into it. Our idea is simply this: at recitations, *scholars should explain more, and teachers should explain less*; for it is then the business of the *pupils* to tell what they know about the lesson.

Let your motto be, "A few branches, and *well*." Discipline mind by thorough, efficient teaching. The apparent advancement of your pupils may be slower than those of the more superficial teacher, but it will, in like proportion, be surer and more lasting. Aim, in all things, to secure the utmost accuracy.

Arrange your pupils into classes as much as possible. It is a vast saving of time, for you can thus act upon many minds at once. Pupils, when classified, have a greater stimulus for improvement than when reciting singly and alone, as was formerly the almost universal practice in our common schools.

Give much attention to the morals and manners of your pupils. You will find an abundance of occasions every day for inculcating correct principles in their minds without giving them sermons on the subject. Incidents will occur by which you can impress the value and importance of always speaking the truth; of honor to their parents; of kindness to each other; of respect to those who are older; of neatness and order. You can do much to discountenance pride, vanity, sauciness, vulgarity, and selfishness, and to encourage the opposite virtues. These incidents may occur in the schoolroom; they may be suggested by reading-lessons, or by recitations; but let them occur, however, and whenever they will, no fit occasion for moral instruction should be allowed to pass unimproved.

We have here endeavored to give a few general hints relating to the management of schools, and in future articles hope to present something more specific in regard to different studies. There is not a more interesting or noble work than that of rightly moulding the youthful mind; and we hope to present here such suggestions as will be useful to teachers and render them efficient aid in their important duties.

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# THE STUDENT.

## ARCHITECTURE OF THE EYE.\*

BY FRANK H. HAMILTON, M.D.

**H**EAR with what swelling words of vanity man proclaims the majesty of his intellect, and the might of his single arm! The "cunning artisan" shall do it, and man shall be lifted to everlasting honor! The clay has laughed to scorn the skill of the potter; the creature, offspring of yesterday, has defied his Creator, whose being is eternity!

Go to, thou boaster! make ready! for the God of nature accepts the challenge, and demands the trial. No space is left whereon to build another defense; but the eye is a little and familiar thing, which an inch will more than span. Upon this "inch" let the wager be laid, and all earth shall stand umpire, while our hopes of a final resurrection and a blessed immortality we plight against the bold adventure.

Build first the walls of defense, the socket, the cheek, and the nasal bones, and the projecting arch above, which shall guard the eye from external violence. Plant the eyebrows in just proportion and arrangement, like tiles so overlapping, and of such exact form and length, as that the acrid perspiration which distills from the brows shall be turned upon the open temples; dye them with some dark pigment; and for those who dwell under the vertical rays of a tropical sun, give a darker hue. Attach a muscle of curious workmanship in mold and fixture, as that at your bidding its thousand fibers shall contract and depress the overhanging thatch.

Work now the lids, of materials soft and pliant; adapt them accurately each to the other, and to the smooth convexity of the eye. Place also the cords which, moved by the intellectual actor behind, shall enable him to raise the curtains, and, looking forth, read in the face of his audit-

ors applause or censure; to be again dropped when the performer needs repose, or when the last great drama is wound up.

Dig a fountain above the outer angle of the lids, where, fed by perennial streams, it shall overflow and wash the adjacent plain. From the fountain draw ten thousand secret wires to the surface of the eye, so watchful and obedient as that, when touched by the smallest mote, they shall suddenly spring the tearful gates, and bear off the offending particle. Let it also be to the mind a safety-valve, to be lifted when pleasure or pain moves the soul to excess; the closure of which, when the passions are in hot ebullition, shall produce disorganization and permanent derangement of the brain.

Excavate at the inner angle a shelving lake, and throw up from its base a rocky islet, well covered with brambles and an oily exudation, designed, when the waters are agitated and cast upon its shores, by the action of the lids, to catch and retain such particles as would obstruct its narrow outlet.

This outlet build of cement finer than purest porcelain, and of capillary dimensions, to absorb the fluids which approach its mouth; endow it with a consciousness of its office and importance; make it irritable and impatient of insult, that when provoked it shall bar its entrance and refuse admission to all, until its tiny wrath is fully appeased.

Arrange along the slender border of each lid minute sacs, stored with unctuous matter, which shall constantly pour their contents from narrow mouths, as oil is laid upon the edge of the brimming bowl to prevent its overflow. Still farther, plant

\* AN ARGUMENT.—"A truly cunning artisan shall construct many things equally deserving of admiration with any thing we see in nature!"—*Martyn's Philos. of Nature*.

outside of these a double row of lashes, that when the lids are nearly closed they shall, by interlacement, effectually exclude all particles of dust, yet admit the light.

Ah! it is a weary and vexatious task for such unpracticed hands! Then rest awhile; for this *inch* of creation, which at first seemed unworthy an artist's hour, is scarce begun! You have raised the walls and built its towers; the gates are hung; you have dug the fountains and the water-pools; you have sheltered all from baneful dews and the scorching sun; but of the beautiful temple within, not a stone is laid nor a timber hewn.

Now mix your ores. Buy silver, gold, platinum, iron, lead, and brass; gather here all your metals, rare and costly, of all degrees of consistency, and strength, and malleability; and when you have carefully selected, fuse them together, and from your crucible mold a crystal like the *cornea*, transparent, tenacious, flexible, smooth, and polished, with the exact convexity and density necessary to a proper refraction and convergence of the rays of light.

Next, form of opaque and stronger materials a case, in which the beveled edge of the *cornea* shall be received, like an optician's lens. Within this globe thus constructed, pour fluids of different densities, as in the perfect achromatic telescope, to combine the rays, and prevent the imperfection of colors.

In the anterior chamber of the eye, let the fluid be thin and pellucid, and inclosed in a fine, transparent capsule, while the posterior chamber must be filled with a more consistent material, like melted glass, and divided into a multitude of minute cellules, by intersecting septa. Between these two, place a double convex lens, of perfect form, its posterior surface the arc of a lesser circle than its anterior. Construct the lens of radiating and concentric fibers, the inner laminæ dense, the outer soft and pulpy. The whole invest with a delicate capsule.

Now mark! if you err in any point, with all these lenses and humors, if there be one minim of fluid too much, or if the lens be one line too convex, or its structure one grain too dense, or the relative proportion

of each be changed one fraction, all your labor is vain. You may as well expect with imperfect rules to ascertain eclipses, or the course and return of the eccentric comet.

Be not faint and discouraged; for, remember, the road to fame was never a "swift highway," but always sadly rough and wearisome, and covered with difficulties thick as rocks upon the mountain sides. Yet it is cheering to know that the diamonds in your *cornea* shall be numbered by the obstacles you have encountered and overcome.

Gird on, for another is before you. But lest your ~~laboring~~ senses rebel at being overtaken, and suddenly depart, leaving your skull an empty cobbler's shop, and this ~~curious~~ work, so well begun, half wrought, you shall invite fresh aid.

Call the shrewd mechanic and cunning artisan; ask counsel of the learned, the mathematician, the geometrician, the chemist; invoke the mysterious science of the Rosicrucian, the sorcerer, and the magician. From all demand knowledge how to weave an *iris*, the *inner curtain*, with its changing *pupil*, formed of circular and diverging fibers, and floating freely in the fluid of the anterior chamber, prompt to dilate when the nerve of vision demands more light, and as prompt to contract when the light is too intense; never moved or excited by the direct infringement of the luminous rays upon its own fibers, but ever faithful and obedient to the calls of the *retina*; and so made that, through the threescore years and ten that it shall serve, watching the while, both night and day, with attentive care, every cloud and shade of the inconstant light, not a string shall loosen nor a thread need repair.

The *retina* form of finest texture, and spread it broad within the back of the eye, like the white canvas of the camera obscura. To absorb the rays and prevent their reflection after they have impinged upon the *retina*, line its posterior surface with a paint which light, however long it may act upon it, shall never fade—an art in coloring not yet attained.

Supply the whole eye with nerves, arteries, veins, and absorbents, for the purposes of growth and reparation; place it upon

a nicely adjusted axis, and give the power of motion and rotation in every conceivable direction; and last, bestow the strange and hitherto inimitable power of adapting its vision to different distances, without any perceptible change in the form of the organ.

Have you done? And does your careful eye detect no flaw or fissure, no failure or imperfection? Hold it up! It is beautiful and wondrous indeed! But one thing more, and the pledge is yours—*now make it see!* “for truly the light is sweet, and a pleasant thing it is for the eyes to behold the sun.”

Let it at one glance receive and recognize the extended landscape, with all its varieties of feature, and color, and distance; the valley, and mountain with its hoary locks; the forest and the rich harvest-fields; the meadow, the pearly lake, the rippling, ever-babbling brook, the village—

“Dim descried in the distant plain,”

the clouds—airy messengers, which come and go in ceaseless procession, like spirits sent from heaven on hasty errands.

Animate it with life, intelligence, sentiment, and passion; make it the door and window of the soul, through which “all without may look in, and all within may look out”—

“The gay recess of wisdom and of wit,  
And passions’ host, that never brooked control.”

In sorrow let it be dimmed and sad; in terror, wild and restless. But to the eye of the angry man, give fire; let a savage brightness shoot from its dark and stormy surface, like lightning amid the blackness of a tempest; and when despair seizes the soul, knit the brows convulsively, and fix the eye in a fierce and sullen glare.

Imprint, also, the finer sentiments. In joy, teach it to sparkle and beam with a mild and radiant light; in love and deep affection, to glow with a warm and melting softness. Here paint innocence and modesty with a sweet and lovely harmony, such as angels look. Benevolence, kindness, charity, patience—the choicest virtues—all holy passions and unholy, both good and evil, must be here depict-

ed; and give it not the blank look of your dumb automaton, until death approaches.

“All flesh must perish;” and as the soul loosens from its mysterious connection, fasten the sightless ball in the gaze of insensibility, and let a cold dampness distil from its surface to dim its luster. Lighten it a moment with a celestial splendor, as if to announce the spirit’s departure; then let its brightness cease forever. Oh, foolish man! How vain are all your boastings, and how dwindled your greatness, when compared with Him “who laid the deep foundations of the earth, and spread the heavens abroad!”

\* \* \* \* \*

Thou hast listened to the song of a siren, and it was the song of Lucifer, “bright son of the morning,” who, warring for the throne and scepter of God, was hurled from the battlements of heaven. Thou hast listened until thine own harp is attuned with most discordant strains; and thy erring feet have been lured to almost where the portals of eternal night shut out the day.

But a new harp is struck, and another song comes gathering upon the air: it is the song of Nature. From the woodlands and the heath, from hill-top and sequestered dell, it comes, and it saith, “There is a God!” It is heard in the rustling of the forest leaves, in the warbling of the morning birds, in the whispers of the evening breeze, in the “warm hum of the insects by the side of the babbling brook,” in the waterfall, in the rushing of the tempest, and the hollow murmur of the ocean tide; and in all it saith, “There is a God!” It speaks in the booming thunder, and is echoed by the broad mountain-side—from all around, above, beneath, a choral anthem is raised, and the voice of every thing is heard to say, in harmonious melody, “There is a God, the Maker and Ruler of all things.”—*Western Literary Messenger*.

[*Artisan*, a mechanic; a person whose occupation is to construct machines, or instruments, goods, furniture, and the like. *Porcelain*, the finest kind of earthen-ware. It is semi-transparent. *Unclean*, fat; oily. *Cruel*, a pot made of earth and so baked as to endure extreme

heat, used for melting metals. *Corn'e-a*, the white of the eye. *Iris*, the colored portion of the eye. *Pupil*, the small circular opening in the center of the iris. *Ret'i-na*, the end of the optic nerve expanded; the seat of vision. *Pe'l-licid*, perfectly clear. *Cap'sule*, a membranous bag. *Cel'lules*, small cells. *Septa*, partitions separating cavities. *Lu'ci-fer*, usually the planet Venus—the morning star; but it is here applied to Satan. *Ros-i-cru'cians*, a sect of philosophers that arose in Germany, in the fourteenth century. They pretended to have discovered the philosopher's stone.]

## THE GALLANT BARK.

BY MISS FRANCES J. CROSBY.

[The following beautiful lines were composed for the occasion, and recited by Miss F. J. Crosby, a blind lady, at the anniversary of the New York Institution for the Blind, held at the Broadway Tabernacle, in this city, May 8, 1850.]

I stood upon the summit of a hill,  
Beneath me rolled Potomac's waters dark;  
It was the hour of midnight, all was still,  
When, lo! before me rose a stately bark;  
Her starry banner to the breeze unfurled,  
While prosperous gales the dancing waters curled.

The scene was changed—a storm swept hoarsely by,

The stars were muffled in a sable pall;  
The lightning flashed, the thunder rent the sky,  
Potomac answered to the fearful call;  
Around that bark the surges madly break,  
But vain their wrath, her course they can not shake.

Onward she flew, and with exulting pride,  
Hurled back the waves that rushed to overwhelm;

Onward she flew, amid the boiling tide,  
For, lo! an angel form was at the helm;  
His brow was lofty and his eye serene,  
Calmly he looked upon that troubled scene.

The tempest ceased, the pensive queen of night  
Looked forth upon the tranquil earth once more,  
And, studded with the gems of golden light,  
The sky a coronet of beauty wore;  
Hushed was the tumult of the raging storm,  
When straight beside me stood that angel form.

"Fear not," he cried, "though mighty thunders crash,

And swiftly dart the lightning's vivid play,  
Though tempest-tossed the waves impetuous dash,  
That gallant bark shall onward hold her way;  
Her stars and stripes shall float o'er land and sea,  
Bearing the motto, 'UNION, LIBERTY.'

"Though party feuds prestage approaching ill,  
They shall not sever freedom's sacred chain;  
While Moultrie's Fort\* remains, or Bunker Hill,  
Its sacred links unbroken shall remain.  
Dissolve the Union! Then let hope retire,  
And bid the voice of Liberty expire!

"Columbia, ere a deed so rash be done,  
Oh! rather from the annals of thy fame  
Blot every mem'ry of thy WASHINGTON,  
Nor heap such base dishonor on his name;  
He comes to warn thee from the realms of light"—  
The spirit paused, then vanished from my sight.

## NO NIGHT BUT HATH ITS MORN.

THERE are times of deepest sorrow,  
When the heart feels lone and sad;  
Times when memory's spell of magic  
Have in gloom the spirit clad.  
Would'st thou have a wand all potent  
To illumine life's darkest night?  
'Tis the thought that e'er in nature  
Darkest hours precede the light.

When the world, cold, dark, and selfish,  
Frowns upon the feeble flame,  
Lighted from the torch of genius,  
Worth has kindled round thy name;  
When the fondest hopes are blighted,  
And thy dearest prospects fade,  
Thi'k, Oh! lone one, scorned and slighted,  
Sunshine ever follows shade.

*Selected.*

A HASTY TEMPER.—Strive hard to subdue a hasty temper. Anger will come, but resist it stoutly. A spark will set a house on fire. A fit of passion may give you cause to mourn all the days of your life. Never revenge an injury.

He that revenges knows no rest;  
The meek possess a peaceful breast.

[\* *Moultrie's Fort* is situated on Sullivan island, six miles below Charleston, S. C., and north of the entrance to the harbor. It was so called in honor of Colonel Moultrie, who commanded it during a battle of the Revolution, and with only four hundred men and thirty-one cannon resisted the attack of the British fleet, with two hundred and sixty-six guns. After eight hours of constant fighting—the sun having long before retired from the dreadful scene—the English withdrew, despairing of conquering such brave men as the little, rudely-constructed fort of palmetto-wood contained. The loss of the Americans, by killed, was ten; that of the English about two hundred.]



GEORGE COPWAY; OR, KAH-GE-GA-GAH-BOWH.\*

BY N. ALLISON.

**G**EORGE COPWAY is an Indian chief of the Ojibway nation, which inhabits the country about Rice Lake, in Canada West. He was born in the autumn of 1818, near the mouth of the river Trent. We can not give a more vivid picture of the scenes of his boyhood, nor do him better justice than to allow him to tell his own history by the following extracts from his life.

"I was born in nature's wide domain! The trees were all that sheltered my infant limbs; the blue heavens all that covered me. I remember the tall trees, and the dark woods; the swamp just by, where the little wren sang so melodiously after the going down of the sun in the west; the current of the broad river Trent: the skipping of the fish, and the

noise of the rapids a little above. It was here I first saw the light.

"A little fallen down shelter made of evergreens, and a few dead embers, the remains of the last fire that shed its genial warmth around, were all that marked the spot. When I last visited it, nothing but fur poles stuck in the ground, and they were leaning on account of decay.

"I am one of nature's children; I have always admired her; she shall be my glory; her features, her robes, and the wreath about her brow—the seasons; her stately oaks, and the evergreen, all contribute to my enduring love for her. And whenever I see her, emotions of pleasure roll in my breast, and swell and burst like waves on

\* His Indian name.

the shores of the ocean, in prayer and praise to Him who placed me in her hand.

"My father was ever kind and affectionate to me. He believed in persuasion; I know not that he ever used harsh means, but he would talk to me for hours together. As soon as it was dark he would call me to his side and begin to talk, and tell me that the Great Spirit would bless me with a long life if I should love my friends, and particularly the aged.

"My mother was also kind and affectionate; she seemed to be happy when she saw us enjoying ourselves by her; often she would not eat much for days together, she would leave all for us. She was an industrious woman, and in the spring she made more sugar than any one else.

"When about five years old, I commenced shooting birds with a small bow and arrow. I have shot many a bird, but am no more a marksman. I used to feel proud when I could carry home my own game. The first thing that any of the hunters shot, was cooked by the grandfather and grandmother, and there was great rejoicing to inspire the youthful hunter with fresh ardor.

"The gun was another instrument put into my hands, which I was taught to use both carefully and skillfully. I was early taught to hunt the deer, and reminded to hunt for myself. A thirst to excel in hunting began to increase. No pains were spared, no fatigue was too great, and at all seasons I found something to stimulate me to exertion, that I might become a good hunter.

"For years I followed my father, observed how he approached the deer, the manner of getting it upon his shoulders to carry it home. The appearance of the sky, the sound of the distant waterfalls in the morning, the appearance of the clouds and the winds, were to be noticed. The step and the gesture, when searching for the deer, were all to be observed.

"Many a lecture have I received while the deer lay bleeding at the feet of my father. He would give me an account of the nobleness of the hunter's deeds, and said that I should never be in want whenever there was any game; and that many

a poor, aged man could be assisted by me. 'If you reverence the aged, many will be glad to hear your name; the Great Spirit who has given the aged long life will bless you. You must never laugh at any suffering object, for you know not how soon you may be in the same condition. Never kill game needlessly.' Such was the language of my father when we were alone in the woods."

The mother of George Copway died in February, 1830, about two years after she had been converted to the Christian faith. In the summer following this sad event, George was also converted. Soon afterward, he commenced attending a mission school established in his own village, and continued to attend it as often as possible for a period of about two years.

In 1834, the superintendent of the mission on Lake Superior, sent to the missionary among the Ojibway Indians at Rice Lake, for two native preachers and two native teachers. George Copway was selected for one of the teachers. At first his father was unwilling to let him go, and he himself was undecided about it. So George left the village and hunted along the river Trent, hoping that the missionaries would leave before his return.

He was absent more than two weeks, and, alluding to this circumstance, he says: "They were the longest two weeks I had experienced. The whole time I felt dissatisfied; something seemed to whisper to me, 'George, go home, and go to Lake Superior as a teacher.'" He returned and found the missionaries waiting for him. His father gave his consent to let him go, and in July, 1834, the party set out for their field of labors.

After spending several months among the Indians, he was sent to school at the Ebenezer Seminary, near Jacksonville, Ill. At this place he remained two years and made great improvement in his studies. In 1839, he determined to visit the East, and accordingly embarked on board a schooner at Chicago for Buffalo. After visiting New York, Boston, and several other noted cities, he returned once more to Rice Lake, where he arrived in November, 1839, having been absent from home more than five years,

He now became a Methodist preacher among his tribe. During the winter of 1839-40, he formed an acquaintance with the family of Captain Howell, of Toronto, formerly from England. After an acquaintance of six months, he was married to one of this gentleman's daughters. Soon after his marriage, he set out, in company with his wife, on a mission among the Indians of the Northwest. He returned to Toronto again, after an absence of two years.

In 1845, a general council of the chiefs of the Ojibway nation of Indians was held, when the Rev. George Copway was appointed agent for the tribes, to procure subscriptions for establishing manual labor schools among them, for the education of their young men, and teaching them industry, economy, and the arts.

During the past five years he has visited many states in our Union, made speeches to their legislatures, and lectured in the principal cities and towns, on the subject of concentrating the Indians of the Northwest upon a territory to be set apart by the general government, where they may enjoy a permanent home, improve in science, in agriculture, morality, and the arts of civilized life.

Last summer (1849), he explored the Northwestern territory with the view of selecting a portion that would be adapted to his plan. He has presented a memorial to the congress now in session at Washington, asking for the establishment of an Indian territory, occupying all the country lying between the Big Sioux River on the east, and the Missouri on the west, to be called KAH-GE-GA—"Ever-to-be the Indian territory." Here he hopes to prepare a permanent home for his noble race, where they may be preserved from that extinction which seems inevitable unless some such great scheme be adopted.

**DEFINITION OF THE UNIVERSE.**—The best definition of the universe, and one which can not be improved, has been given by Paschal: "The center of the universe is everywhere, and the circumference of it nowhere." This is not only astronomically exact, but unimprovably concise and elegant.

## HINTS TO YOUNG MEN.

Idleness.

BY HENRY WARD BEECHER.

**I**NDUSTRY is habitual activity in some useful pursuit; and not only inactivity, but also all effort without the design of usefulness, are of the nature of idleness. The supine sluggard is no more indolent than the bustling do-nothing.

Men may walk much, and read much, and talk much, and pass the day without an unoccupied moment, and yet be substantially idle; because industry requires, at least, the intention of usefulness. But gadding, gazing, lounging, mere pleasure-mongering, reading for the relief of *ennui*; these are as useless as sleeping, or dozing, or the stupidity of a surfeit.

There are many grades of idleness; and we shall indulge in some descriptions of the various classes, leaving the reader to judge, if he be an indolent person, to which class he belongs. First, the lazy man. He sleeps long and late; he wakes to stupidity, with indolent eyes sleepily rolling over neglected work; neglected because it is too cold in spring, and too hot in summer, and too laborious at all times. He is a great coward in danger, and therefore very blustering in safety.

Second. Another idler as useless, but vastly more active than the first, attends closely to every one's business except his own. He has good advice for every body, how to save, how to make money, how to do every thing. He is a violent reader of newspapers, almanacs, and receipt-books; and with scraps of history, and mutilated anecdotes, he faces the very schoolmaster, and gives up only to the volubility of the oily village lawyer. What useful thing do these buzzing idlers perform?

Third. We introduce another idler. He follows no vocation; he only follows those who do. Sometimes he sweeps along the street with consequential gait; sometimes he perfumes it with wasted odors of tobacco. His business is to *see*; his desire, to be seen. He is a man of honor; not that he keeps his word, or shrinks from meanness. He defrauds his landlord, his tailor, his landlord. He drinks, and swears, and sometimes fights; but



still he is a man of honor, for he has whiskers, wears a mustache, and says, "Upon my honor, sir;" "Do you doubt my honor, sir?"

Then there is the fashionable idler, whose riches defeat the very object for which God gave him birth. He is a reader of fiction; gay and frivolous, rich and useless, polished till the enamel is worn off, his whole life seems to make him an animated puppet of pleasure.

One other portrait should be drawn, of the person who wishes to subsist by his occupation while he attends to every thing else. If a sporting club goes to the woods, he must go. He has set his line in every hole in the river, and dozed in a summer day under every tree along its bank. He rejoices in a riding party, a sleigh-ride, a summer's frolic, a winter's glee. He is forever busy where it will do him no good, and remiss where his interests require activity.

It would be endless to describe the wiles of idleness; how it creeps upon men, how sweetly it mingles with their pursuits, how much time it purloins from the scholar, from the professional man, and from the artisan. It steals minutes, it clips off the edges of hours, and at length takes possession of days. It makes labor heavy; scatters attention; and it lurks around to impede the sway of industry.

Indolence is a great spendthrift. An indolent young man can neither *make* nor *keep* property. If he borrows, the article remains borrowed. He spoils your work, disappoints your expectations, exhausts your patience, and hangs a dead weight upon all of your plans.

You will abhor idleness in others without suspecting it in yourself. While you read, I fear you are excusing yourself; you are supposing that your leisure is only relaxation, not sloth; that it is genteel leisure, not idleness. Be not deceived: if you are idle, you are on the road to ruin; and there are few stopping places in it.

[The preceding article is composed of extracts from Rev. H. W. Beecher's Lectures to Young Men. *Mustache*, long hair on the upper lip. *Laundress*, a washer-woman; one who does washing and ironing.]

## SELF-TRAINING.

**F**ew young men regard the importance of self-training with sufficient seriousness. Every youth, would he but follow the advice of those who give him good counsel, whether by personal conversation, the printed page, or the more silent example, might become a useful and valuable member of society. But hear what the late Sir F. Buxton says on the subject:

"I am sure that a young man may be very much what he pleases. In my case it was so. I left school, where I had learned little or nothing, at the age of fourteen.

"I spent the next year at home, learning to hunt and shoot. Then it was that the prospect of going to college opened upon me.

"I made my resolutions, and I acted up to them. I gave up all desultory reading; I never looked into a novel. I gave up shooting.

"During the five years I was in Ireland, I had the liberty of going when I pleased to a capital shooting-place. I never went but twice. In short, I considered every hour as precious, and I made every thing bend to my determination not to be behind any of my companions; and thus I speedily passed from one species of character to another.

"I had been a boy fond of pleasure and idleness, reading only books of unprofitable entertainment; I became speedily a youth of steady habits of application, and irresistible resolution. I soon gained the ground I had lost, and found those things which were difficult and almost impossible to my idleness, easy enough to my industry; and much of my happiness, and all my prosperity in life, have resulted from the change I made at that age.

"It all rests with yourself. If you seriously resolve to be energetic and industrious, depend upon it you will, for your whole life, have reason to rejoice that you were wise enough to form and act upon that determination."

Such is the language of one who knows from experience. Will you profit by it?

## Coats of Arms, or State Seals.—No. 2.



### NEW YORK.

**T**HE seal of the State of New York is represented by a shield in the center, on which appears the rising sun, with a range of hills, and water in the foreground. Above the shield is the crest, represented by a half globe resting on a wreath, and on the globe stands a startled eagle, with outstretched pinions.

The shield is supported on the right by the figure of *Justice*, with a sword in one hand and a pair of scales in the other; and on the left by the goddess of *Liberty*, with a wand and cap in her left hand, and an olive-branch of peace in her right. The wand or rod, and cap, are symbols of independence. Among the ancients the former was used by the magistrate in the ceremony of manumitting slaves; and the latter was worn by the slaves who were soon to be set at liberty. Below the shield is the motto *EXCELSIOR*, signifying "more elevated," and denoting that the course of the state is *onward* and *higher*.

The State of New York was settled by the Dutch, in 1615, at Albany, then named

Fort Orange. This is the most northern of the middle states, and the most populous one in the Union. It is about 320 miles long from east to west, and 300 miles broad; containing 46,000 square miles. Its population in 1847 was 2,780,000. This state contains 59 counties, which are divided into about 878 towns. The capital is Albany, situated on the west bank of the Hudson river, 145 miles north of New York city.

This state has a great variety of surface. Two chains of highlands, rising in some parts to mountains, pass along its eastern portion. One of these, coming from New Jersey, crosses the Hudson river near West Point, constituting the Highlands, and passing northward, separates the waters which fall into the Hudson from those which flow into Long Island sound. The other and principal range, coming from Pennsylvania, forms the Catskill, and after crossing the Mohawk, the Adirondack mountains, in the north-eastern part of the state.

The highest mountain in the state is Mount Marcy, 5,460 feet high. Round

Top is the highest peak of the Catskill, being 3,800 feet high. Pine Orchard, on which is situated the "Mountain House," a fine retreat in summer, is 2,274 feet high, standing about ten miles back of the village of Catskill. From this place a view of the country is obtained for seventy miles in extent.

The interior of the state is interspersed with numerous beautiful lakes, on many of which may be seen the whitening sail, and the steam-boat's smoking pipes. Beside the navigable rivers, New York contains about 850 miles of inland navigation by canals. Its rail-roads number more miles than those of any other state in the Union. It now contains 1300 miles of road, over which the iron steed makes his regular journeys.

While our persons, our letters and papers, our merchandise, and our produce, are rapidly borne over the iron track, from one extremity of the state to the other, on the great highways of thought, with the lightning of heaven for a courier, our messages are conveyed from city to city, and to distant friends.

In the State of New York there are 11,191 school districts, and 1900 private schools; besides 158 academies and seminaries, which receive appropriations from the legislature; also 8 colleges and 6 theological seminaries. The district school libraries contain 1,410,000 volumes, making an average of about 126 volumes to each district.

First among its many flourishing cities stands New York, with a population of nearly half a million, the great commercial metropolis of the United States, and, in amount of shipping, second only to London. It has one of the finest harbors in the world, one which is accessible at all seasons of the year. To the state and city have been appropriately given the appellations of "Empire State" and "Empire City."

[*Crest*, the ornament of a helmet; the plume of feathers, or other material, worn on the top of the ancient helmet. *Man-u-mit'ting*, releasing from personal bondage or slavery. *Cour-ri-er* (koo're-er), a messenger sent express for conveying dispatches, letters, etc.

## SOCIAL RELATIONS—THE DAISY.

BY ELIHU BURRITT.

**W**e had no suspicion that the "Learned Blacksmith" was a poet, until meeting with the following extract from his writings; but this establishes his claims as a writer of poetical thoughts, at least:

"You can not go into the meadow and pluck up a single daisy by the roots, without breaking up a society of nice relations, and detecting a principle more extensive and refined than mere gravitation. The handful of earth that follows the tiny roots of the little flower is replete with social elements.

"A little social circle had been formed around that germinating daisy. The sun-beam and the dew-drop met there, and the soft summer breeze came whispering through the tall grass to join the silent concert; and the earths took them to their bosom, and introduced them to the daisy germ; and they all went to work to show that flower to the sun. Each mingled in the honey of its influence, and they nursed 'the wee, canny thing,' with an aliment that made it grow.

"And when it lifted its eyes toward the sky, they wove a soft carpet of grass for its feet. And the sun saw it through the green leaves, and smiled as he passed on. The daisy lifted up its head, and one morning, while the sun was looking upon the dews, it put on its silver-rimmed diadem, and showed its yellow petals.

"And it nodded to the little birds that were swimming in the sky. And all of them that had silver-lined wings came; and birds in black, and gray, and quaker brown came; and the querulous blue-bird, and the courtesying yellow-bird came, and each sung a native air at the coronation of that daisy.

"Every thing that sung or shone upon that modest flower was a member of that social circle, and conspired to its harmony and added to its music. Heaven, earth, sky and sea, were its companions; the sun and stars walked hand in hand with it, as kindly as if they never saw another daisy, or had another companion."

## Science,

"Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### IRON ORE.

BY T. ANTISELL, M.D.

**T**HE stones which contain iron are among the most abundant of the mineral gifts which Providence has bestowed on this country. These iron-stones, or ores, as they are called, do not contain the metal in a pure condition, or such as we have in the iron ready for use; but united with sulphur, oxygen, or some other substances, which have to be removed before the pure metal is obtained.

This separation, or removal, constitutes the iron manufacture; a business which occupies more hands than any other operation in metals, and requires furnaces which afford a greater heat than is used in treating or smelting other metals. Hence every iron furnace has its village round about it, and some factories employ three thousand hands.

It is remarkable that this metal, now so extensively applied in every occupation as to become an absolute necessity of life, where civilization exists, was comparatively unknown and disregarded until three centuries before Christ. In the early stages of society, iron has never been used as an implement of war or of the chase, those implements, even among the most enlightened of the ancient nations, having been made either of copper or of bronze metal.

In our day, it is known to be an invigorator of the frame, and one of the best tonic medicines, while among the early nations it was looked upon as a poison, and that wounds made with iron instruments were poisonous. Hence, after the Tarquins were expelled from Rome, Por-senna stipulated with the citizens that they should not use iron except in agriculture.

Now it is applied to innumerable purposes; every thing we possess is manufactured by its means. It is also used in painting, enameling, and dyeing; in the preparation of leather, hats, and ink. It

is valuable in all situations, from the massive chain cable to the delicate watch-spring, and from the ponderous mill-saw to the finest lancet. It is *Protean* in its forms. It may be cast in molds of any shape; it may be drawn into wire of any strength or fineness; it may be beaten and rolled into sheets; it can be bent, sharpened, hardened, or softened, at pleasure.

There are about nineteen valuable ores of this metal, which are scattered over every part of the globe. The purer varieties, such as the native iron and the oxide, are found in greatest abundance in northern and polar latitudes. Their vast quantity in the latter locality has led to the belief that the poles (beneath the surface) must be one mass of native iron, capable of making the magnetic needle dip quite vertically there.

Iron exists largely in lava and volcanic rocks; the decay of which, as basalts and trap rocks, furnish some of the best ochre and umber colors. These rocks are magnetic; that is, they make the ship's compass to deviate from its true course when it nears the coast where basaltic rocks exist.

This attractive property was first observed in some iron-stones brought from Asia Minor, and the most powerful being from the city of Magnesia, gave the name of magnets to this class of substances.

The kingdoms of Castile and Arragon, in Spain, have furnished iron ores from very remote antiquity. The ancient Romans obtained their iron from Elba. Styria, in Austria, supplies still a moderate quantity. Sweden furnishes the finest kinds, but England by far the largest amount. In the latter place, the chief ore is a clay iron-stone, or iron united with carbonic acid and mixed up with clay

Although not appearing to the view metalliferous, it yields one third of its weight of pure iron. The ore lies in a coal basin, so that the working for coal obtains the iron-stone; and this is the reason England enjoys such facility for manufacturing iron.

Situated upon the edges of the coal fields of South Wales, lie the great smelting and blast furnaces, in which iron and copper ores, from all parts of the world, are converted into metal.

In Sweden, the magnetic iron is the ore which is there obtained and worked. In Pennsylvania, New Jersey, New York, and New England, it is also extensively used; and to some extent in Russia. This is a rich ore, and yields more than half its weight of metal. The varieties known as brown hematite, and bog-iron, are plentiful in New England and the northern part of New York, and are very rich in metal.

The manufacture of iron depends upon the separation of the earthy matters which are found united with the metal in the ore. This separation is accomplished by the application of a very strong heat, and while the ore is at that high temperature bringing substances into contact with it, which are capable of removing those matters, and setting free the iron. To obtain this high heat, furnaces of peculiar construction are required, to economize fuel and admit abundance of air.

We shall, in a subsequent communication, explain the process of the separation of iron from its ores, and of the manufacture of steel.

[*Bronze Metal*, a metal composed of copper and tin. It is used for statues, bells, and cannons. *Prote-an*, readily assuming many shapes. *Elba*, a small island in the Mediterranean, remarkable for having been the place where Napoleon was banished, in 1814.]

### General Intelligence.

**ARCTIC EXPEDITION.**—One of the ships sent from this port by Henry Grinnell, Esq., to search for Sir John Franklin, has been named "*Advance*," instead of "*Lady Jane Franklin*," as mentioned in our last number. The other is called the "*Rescue*."

These two vessels are manned by thirty-six men. They sailed from New York on the 22nd of May. One of the vessels recently sent out from England for the same object is called the "*Lady Franklin*."

**DEATH OF MR. WORDSWORTH.**—William Wordsworth, the distinguished poet, was born in Cumberland county, England, in 1770, and died the 23rd of April, 1850. His first attempt at poetical composition was at the age of thirteen, but it was not until ten years afterward that his writings appeared in print. His collected writings, which have passed through several editions in this country, as well as in England, form an immortal monument to his memory. The death of two distinguished English poets has now been announced within a short period—Bowles, and Wordsworth.

**DEATH OF MRS. OSGOOD.**—Frances Sargent Osgood, so well known as one of our most distinguished American female writers, died in this city on Sunday, the 12th of May last. She was the daughter of Mr. Joseph Locke, of Boston, and the wife of Mr. S. S. Osgood, the artist. During last summer Mr. Osgood was absent, in California. He returned early last February, with restored health, and a fair share of gold dust. Meanwhile Mrs. Osgood's health began to fail; and just as the promise of life seemed fairer than ever, she was snatched away by consumption. She was about thirty-seven years of age, and left two daughters, of the ages of ten and twelve.

**IMMIGRANTS.**—During the week ending the 19th of May last, there arrived at the port of New York 17,801 immigrants from foreign ports. During one day, Friday, the 17th ult., there arrived about 5,000 immigrants. This exceeds the arrivals of the same length of time, during any former period.

**PROFESSOR MITCHELL**, of the Cincinnati Observatory, has recently been elected an honorary member of the Royal Astronomical Society of England.

**A STATE TEACHERS' CONVENTION**, for the State of Ohio, is to meet at Springfield, Ohio, on the 3rd and 4th of July next.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### CHOOSING A PROFESSION.

BY MISS ELIZA A. CHASE.

ONE pleasant afternoon in summer, two school-boys were seated beneath a tree, apparently musing, as neither seemed inclined to conversation. At length the larger turned to the other, and said: "Well, Ernest, school is over, and a long vacation is before us; how do you intend to spend your leisure time?"

"I shall look about and decide upon my future business, as at the close of the next term I must leave school. I intend to visit different shops, and choose a suitable trade."

"Learn a trade! You do not mean what you say, Ernest. Why not choose a profession?"

"Because, William, the professions, as you term them, are already overstocked, and I deem a trade the safest and best business. In these days of improvement, a mechanic will always find sure and profitable employment."

"A mechanic! That is too small business for me. I will be a physician, a lawyer, or a merchant; none of your low trades for me, Ernest."

"I differ from you, William, in calling any honest employment low. But for machinists, where would be our steam-boats, rail-roads, and the like? I am much pleased with the business of making machinery for steam-engines; and as I have already told you, I shall become a little more acquainted with the various trades, and choose such as I prefer."

"And I shall do no such thing. I will be a professional man, and while

I am wealthy and honored, you will be a poor mechanic."

"I hope you will succeed, William; but time will show whether I shall be a poor mechanic."

Ernest Graham was the only child of a widow in limited circumstances; but he possessed what is more valuable than wealth, a mind stored with correct principles and useful information. Knowing that he must depend entirely on himself, he wisely adopted the resolution of finding some occupation, the profits of which would increase with the growing interests of the country.

Accordingly, after visiting different places, and by his intelligent inquiries eliciting much valuable and important information, he engaged as an apprentice to a machinist.

His studies were not neglected, however, and all the time he could spare from his laborious employment was devoted to the cultivation of his mind. Being very fond of the study of mechanics, he soon united the theory with the practice of his art. By his intelligence, energy, and faithfulness, he won the confidence of his employer, and ere long was admitted as partner in the thriving establishment.

At the age of twenty-one William Langdon left college, and in a short time commenced business as a merchant, with a capital of ten thousand dollars. His father dying soon after, left him sole owner of the whole property; and in a few years, by imprudence and extravagance, he became

so involved that he was obliged to compound with his creditors for fifty cents on a dollar. He then went to the West, to try his fortune there.

At the age of thirty-five these men again met. William Langdon had returned, with a broken constitution and a helpless family, and, failing elsewhere, applied to Ernest Graham for employment. "It is too small business" were the words which rose to the lips of Graham; but, suppressing the taunt, he kindly extended aid to the unfortunate man.

"While I am wealthy and honored, you will be a poor mechanic," William had said, in his boyish days; but the fact was far different. Ernest Graham had obtained a patent for valuable improvements in machinery, and instead of the "poor mechanic" was the "wealthy and honored" inventor; while William Langdon earned a sustenance as book-keeper in the firm of his former school-mate.

### CONVERSATION ON PHILOSOPHY.

#### FIRE.

Concluded from page 16.

*Mother.*—Did you ever see a person rub his hands together, when he he was cold?

*Child.*—Oh, yes, mother, a great many times. I have seen father come in from the cold and rub his hands together, and afterward hold them to the fire and rub them again, and then they get warm.

*Mother.*—And now take your hand and rub it quickly backward and forward, over that woollen table-cloth, on the table in the corner of the room, and tell me whether that will make your hand warm.

*Child.*—Oh, yes, I feel it grow warmer the faster I rub it.

*Mother.*—Here are two small pieces of wood. Touch them to your cheek, and tell me whether they feel warm.

*Child.*—They do not feel warm, nor cold, mother.

*Mother.*—Now rub them together quickly a little while, and then touch them to your cheek.

*Child.*—Oh, dear, mother! they are so hot that they almost burned my cheek.

*Mother.*—Yes, my dear; and do you not recollect, when you read Robinson Crusoe, that his man Friday made a fire by rubbing two pieces of wood together.

*Child.*—Oh, yes; and I have often wondered why Alice could not light her fire and the lamp in the same manner, without those matches, which have so offensive a smell.

*Mother.*—It is very hard work to obtain fire by rubbing two pieces of wood together; and it would take too long a time to do it. The two pieces of wood would grow warm by a very little rubbing; but in order to make them take fire, they must be rubbed together a great while.

*Child.*—But, mother, if it takes so long a time to get fire by rubbing two pieces of wood together, why can Alice set the match on fire so easily by rubbing it once on the sand-paper?

*Mother.*—That is what I am about to explain to you. Here, take this piece of paper and hold it up to the lamp.

*Child.*—It has taken fire, mother.



*Mother.*—Now take this piece of pine wood, and hold that up to the lamp in the same manner, and see whether that will take fire too.

*Child.*—Yes, mother, it has taken fire; but I had to hold it up to the lamp much longer than I did the paper.

*Mother.*—Now take this piece of hard wood, and do the same with that.

*Child.*—The hard wood takes longer still to catch fire, mother.

*Mother.*—Yes. And now I am going to make the hard wood take fire more quickly than the paper did.

*Child.*—How can you do it?

*Mother.*—I am going to show you. Here is a small vial, which contains something that looks like water. It is spirits of turpentine. I shall dip the point of the piece of hard wood into the vial, and take up a little of the spirits of turpentine. Now touch the point of the hard wood with the turpentine on it to the flame.

*Child.*—Why, mother, it caught fire as soon as I touched the flame with it!

*Mother.*—And you now see that some things, like the spirits of turpentine and the paper, take fire very readily, and others take fire with more difficulty.

*Child.*—Yes, mother; but when Alice drew the match across the sand-paper, there was no flame nor fire to touch it to. How, then, could it take fire?

*Mother.*—Hold this piece of paper up to the blaze of the lamp, but be careful not to touch the fire or flame of the lamp; only hold it close to the blaze.

*Child.*—Why, mother, it has taken fire!

*Mother.*—You see, then, that a thing will sometimes take fire when it does not touch the fire.

*Child.*—Yes, mother; but I do not understand where the fire comes from.

*Mother.*—The fire comes from the heat. Now, you know that heat is produced by rubbing two things together; and that some things, like the spirits of turpentine, take fire very easily, or with very little heat; and

others, like the hard wood, require to be heated some time: or, in other words, require much heat, to make them take fire, or to burn. Some things require only as much heat to make them take fire as can be obtained by rubbing them together very quickly, like the wood which Robinson Crusoe's man Friday used.

*Child.*—But, mother, the match is made of wood; why does that take fire so easily?

*Mother.*—It is true that the match is made of wood; but it has something at the end of it which takes fire much more easily than the spirits of turpentine. Indeed, so easily does it take fire, that it requires only so much heat to set it on fire as is obtained by drawing the match once across the sand-paper.

*Child.*—Well, mother, I understand, now, how the match is set on fire. It is rubbed on the sand-paper, and that produces heat, and the heat sets the match on fire. But I always thought that fire makes heat, not that heat makes fire.

### A DREAM.

I DREAMED last night of wandering lone,  
In nature's wildest wood,  
Where foot of man scarce ever trod  
The deep, dark solitude.

All was in wintry robes arrayed,  
Of ice, and frost, and snow;  
No sunlight bright illumed the place,  
And left its cheerful glow.

And there, methought, a noble stream  
In a deep valley lay,  
Whose waters bright reflected light  
That cheered my lonely way.

But whence the light that o'er it gleamed  
I saw not, nor could tell;  
Yet the sweet influence on my heart  
Will be remembered well.

'Twas like the gush of sympathy  
When overwhelmed with sorrow;  
Or like the cheering voice of hope  
That bodes a brighter morrow.



Or like the kindly words of friends  
That cheer us on life's way,  
And bid us yield not to despair,  
But wait a brighter day;

Or like the gentler tones of love,  
That lighter make each hour;  
Or like a dream of happiness,  
In Eden's blissful bower.

And now when all is dark as night.  
I will recall that dream,  
With visions bright of cheering light,  
That robbed that crystal stream.

S. ELIZA.

### THE DANGEROUS COMPANION.

**D**ISORDER is not only a disagreeable, but a dangerous companion; yet there are many persons who associate with him, and seem satisfied with his company. Hear what is said about him:

"I can't find my shoes!" "My cap is lost! Who has my cap?" "O dear! where is my knife?" "Who can tell where the umbrella is?" "I wish some one would help me find my book!" These are some of the cries that come from the mouth of those who keep company with Disorder.

Such persons can never find what they want. They are apt to be fretful and peevish, cross and pouting. Disorder never minds how much trouble he causes, or how he puts things out of place. He is very selfish, and, as you may well suppose, a very dangerous companion. But there is something still worse about him. He is a ROBBER.

"A robber! Is Disorder a robber?" you ask, with surprise.

Yes, indeed, he is a robber. Did you never suspect it? And he is so cunning and so cruel, that he generally takes that which no amount of money can ever restore to us. He takes the most precious thing we have—our time.

This he snatches out of our hands,

and runs away with it so fast that there is no catching him. As for the sheriff and constable, he is sure to slip out of their way. They have never yet been able to secure him. An artful fellow is this Disorder.

What can be done to ferret him out and get rid of him? I am certain he is still lurking in the community, for glimpses of him have been caught. Besides, every now and then I meet persons who have been robbed by him.

A young lady lost a ride to Boston the other day, because he had stolen away a little of her spare time. There are several children I know, who have been losers on his account. One lost his certificate at school, and another his place in his class, because Disorder had robbed him of some of his time.

Now will not somebody offer a large reward to any one who shall succeed in taking this robber? It is dangerous for him to be at large. Every child is liable to his assaults. It is said that he always begins his robbery with children, and finally becomes so bold as to rob men and women.

Now all children should be on their guard against him, for they are sure to lose whenever they are so unfortunate as to get into his clutches. He hides their books, loses their playthings, causes them to be late at school, and disarranges their desks.

He is a sly creature, and may creep in and hide in a trunk, or stow himself away in drawers, or dodge into a clothes closet, or steal into the book-case. Now, children, keep a sharp look out, and never let him stay where you are.

**HINT TO THE YOUNG.**—Ten minutes well spent, at fifteen years old, are worth more than a whole day would be at seventy.

## Natural History.



THE CANARY-BIRD AND ITS NEST.

BY HENRY WILSON.

**T**HE Canary Birds now kept and reared in America, as well as throughout the whole of Europe, were originally natives of the Canary Islands. There they are still found in pleasant valleys, and on the delightful banks of sparkling rills and small streams. But for some two hundred years they have been bred in Europe.

About the beginning of the sixteenth century, a ship was wrecked on the coast of Italy, which, in addition to merchandise, had a multitude of Canaries on board. These birds, thus obtaining their liberty, flew to the Island of Elba, the nearest land. There they found a propitious climate, and multiplied very rapidly.

Had not man interposed, by hunting them for cage birds, until they were entirely extirpated, they would probably have naturalized themselves there.

In Italy were found the first tame Canaries, and there they are still raised in vast numbers. Within the last hundred years they were so uncommon and expensive, that only princes and people of great wealth could keep them. But at the present day these birds are raised in all our cities, and most of the towns, and sold at moderate prices.

In its native island the plumage of the Canary Bird is said to be more beautiful than that of our tame ones; but its song is less melodious and varied, consisting of fewer notes, and

uttered at longer intervals. The original color of this bird in its wild state was gray, merging into green beneath; but by domestication and climate it has been so changed that Canaries may now be seen of almost every hue.

Most commonly they are of some shade of yellow; but some are gray, others white; some are reddish brown, or chestnut-colored, others are beautifully shaded with green. These are the prevailing colors, but they are blended in various combinations, and thus present every degree of shade. Those the most prized exhibit most marked and regularly these various shades.

The one most generally admired, at present, is yellow, or white upon its body, and of a dun, yellow color on the wings, head, and tail. Next in degree of beauty is that which is of a golden yellow, with black, blue, or blackish-gray head, and similar wings and tail. There are also gray ones, with yellow heads, or with a ring about the neck; and white ones, with a yellow breast, and white head and tail. Those which are more irregularly marked are less esteemed.

The Canary Bird is five inches in length, of which the tail comprises two inches and a quarter. Sometimes the female is not easily distinguished from the male; but the latter has generally deeper and brighter colors, the head is rather thicker, the body is more slender throughout, and the temples and space around the eyes are always of a brighter yellow than the rest of the body.

In selecting a bird, those are best which stand upright on the perch, appear bold and lively, and are not frightened at every noise they hear, or every thing they see. If its eyes are bright and cheerful, it is a sign of health; but if it keeps its head under the wing, it is drooping and sickly.

Its song should also be particularly

noticed, for there is much difference in this respect. But as it often depends on the peculiar taste of the purchaser, no directions can be given for its application. In respect to the notes of these birds, there is much difference. Some of them have very fine notes; but if the song is not fine they can be educated, by being placed with another, which is a good singer.

They catch the tones of other kindred songsters with considerable facility; hence, among the best singers, there is a material difference in the song, which depends mainly on the bird with which they have been educated. In some countries the nightingale is employed as a master musician to a whole flock of Canaries; and it is this which gives some foreign birds a different tone of voice from those bred in this country.

In teaching the Canary Bird to sing, it is usual to take him from his comrades, and place him in a cage alone. This is covered with a cloth, when a short, simple air is whistled to him, or played on a flute, or a small organ. In this manner, by repeating the tune five or six times each day, especially mornings and evenings, he will learn to sing it. But it will frequently require five or six months before he will retain the whole tune.

Canary Birds sometimes hatch their young every month in the year; but more commonly they breed only in the spring, summer, and fall months. After the young birds are hatched, the old ones are fed with soft food, such as cabbage, lettuce, chick-weed; also with eggs boiled hard, and minced very fine with some dried roll, or bread containing no salt, which has been soaked in water, and the water pressed out. Rape-seed, or the seed of the turnip, is much used for their food.

Up to the twelfth day the young birds remain almost naked, and re-

quire to be covered by the female; but after the thirteenth, they will feed themselves. When they are a month old they may be removed from the breeding cage.

It is a curious fact that, when two females are with one male in the same cage, and one female dies, the other, if she has not already sat, will hatch the eggs laid by her co-mate, and rear the young as her own.

[To the politeness of Mr. C. M. Saxton, of this city, we are indebted for the beautiful engraving at the head of this article. It is from a work just published by him, called "The American Bird Fancier." Those who wish to learn more about rearing the Canary and other cage-birds, will find this an excellent work.]

### A WATER SONG.

HERE, children, is a little song for you, from the "Portland Pleasure-Boat," about water, pure, sweet water—the healthiest drink ever used. We fear some of you do not know how good water is.

Many children are in the habit of drinking tea and coffee. This is a bad habit, and we advise you to get rid of it. We know children who drink nothing but cold water, and they are as healthy and happy as the birds; their cheeks are red, and they are much prettier than those who drink tea and coffee. Did you ever notice how sweetly the little birds sing, after they have wet their throats with pure water? If not, watch them. But here is the song:

#### WATER.

"Water! water!" cries the bird,  
With his singing, gentle note;  
And the liquid cry is heard  
Pouring from the little throat;  
Water! water! clear and sweet!  
"Te-weet! Te-weet!"

"Water! water!" roars the ox,  
While it rushes at his side,  
Down among the mossy rocks,  
Rippling with its crystal tide;

Water! water! pure and true!

"Moo! Moo!"

"Water! water!" said the tree,  
With its branches spreading high;

"Water! water!" rustled he,  
For his leaves were very dry;  
Water! water! for the tree,  
Pure and free!

"Water! water!" said the flower,  
Whispering with its perfumed breath;

"Let me have it in an hour,  
Ere I thirsting droop in death!  
Water, water, soft and still,  
Is my will!"

"Water! water!" said the grain,  
With its yellow head on high;  
And the spreading, fertile plain,  
Ripening, joined the swelling cry,  
Water for the grains of gold!  
Wealth untold!

Water! water! sparkling, pure,  
Giveth nature every where;  
If you drink it, I am sure  
It will never prove a snare;  
Water is the thing for me—  
Yes! and thee!

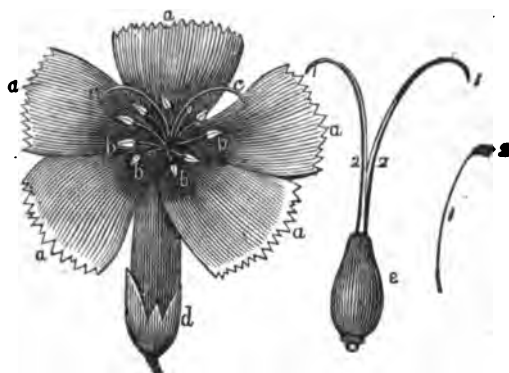
Water! water! Young and old!  
Drink it, crystal-like and sweet!  
Never heed the tempter bold—  
Crush him underneath your feet!  
Water! water! youth, for thee—  
Thee and me! W. O. BOWEN.

### THE LETTER H.

A YOUNG collegian was one day contending with the Rev. Rowland Hill, as to the utility of the letter H. "Of what use is it," said he, "before a vowel? it begins no word in which, if followed by a vowel, it might not be omitted without any detriment to the sound. In your own name, for example, it might as well have been left out."

"I beg your pardon," replied Rowland Hill, "its omission would have been to me of very serious consequence, as, but for the H, I should have been *ill* all my lifetime."

## LESSONS IN BOTANY.—No. 2.



CALYX AND COROLLA.

BY FLORA MILFORD.

**J**UNE being emphatically the season of blossoms, this part of the plant naturally attracts our attention at the present time. In common language, the flower consists of those bright-hued leaves which so beautify creation; but in a botanical sense the word has a very different meaning.

As the root, stem, and leaves, are essential to the growth of the plant, so there are various organs necessary to the perfection of the fruit. These are called organs of fructification, and are six in number, viz.: the *calyx*, *corolla*, *stamens*, *pistils*, *receptacle*, and *pericarp*.

These organs may be seen in the above cut: *d*, calyx; *a*, corolla; *b*, stamens; *c*, pistils. The *receptacle* is the end of the flower-stalk on which the above named organs are situated. The *pericarp* is the covering of the fruit or seed, whether it be in the form of a *pod*, *bag*, *shell*, *pulp*, or *berry*.

If we notice the bark of a plant, as it approaches the blossom, we shall see that it expands into a leaf or leaves, differing much in form and texture, in various plants. This organ is called the *calyx*, the different

leaves of which are termed *sepals*. When the calyx consists of one piece, it is termed *monosepalous*; if of more than one, it is *polysepalous*.

In the poppy it consists of two large leaves, which fall off before the flower is fully expanded, and hence is called *caducous*. When it remains on the plant after flowering, it is said to be *persistent*. The apple is a good example of this; the calyx may be plainly seen even on the ripe fruit.

The various forms of the calyx are distinguishing characteristics of plants, and form an important guide in determining the species.



PERIANTH.

The most common kinds of calyx are, first, *Perianth*. This term is from two Greek words, *peri*, around, and *anthos*, flower. This is the only true calyx, and a very good example may be found in the pink, which is tubular, and dentate, or toothed; also in the rose, which is urnform, five-cleft, and fleshy. The hollyhock, mallows, and others, have a double perianth. The perianth of the thistle is *imbricate*, or lying over like the shingles of a house, *swelling*, and *echinate*, or beset with prickles.

**Involucrum.**—This kind of calyx is



INVOLUCRUM.

found in the dill, fennel, and carrot. It is *universal* when it belongs to the whole of an aggregate flower; and *partial* when it incloses one floret, which, with others, constitutes an aggregate flower.



SPATHA.

lanceolate, afford good examples of the spadix.



GLUME.

The *Glume*, or *Husk*, is the calyx of the grains and grasses. In the oat and wheat it forms the chaff.

The calyx is not an essential organ, as it is wanting in some plants. Its

use seems to be in supporting the other parts of the flower. Those flowers which have long, slender petals, usually possess a calyx, while those with strong, broad petals, have none; as in the lily and tulip. In some plants the calyx serves the purpose of a seed vessel, and in all cases it is of use in protecting the delicate flower before it expands.

Next in order is the *corolla*, or crown, each piece of which is called a *petal*. The corolla is an expansion of the fibers of the inner bark of the plant, and is of an extremely delicate

texture; and to this is owing its short duration. It is traversed by innumerable veins, so very minute as in many cases to require a high magnifying power to distinguish them.

The corolla is noted for the beauty and brilliancy of its colors, which may be found of all shades except black. We have, indeed, what are termed black roses, and black dahlias, but the nearest approximation to black is a dark purple. The color of the corolla varies in the same species; thus in the four-o'clock it is a bright scarlet, a delicate pink, or beautifully variegated. The same diversity of color may be seen in the garden lady-slipper (*impatiens*).

These varieties of color are owing to circumstances we can not control, and which, perhaps, we do not understand. Difference in soil, changes in the atmosphere, and various modes of cultivation, may be the cause; but whatever it is, the result is to produce new beauties in the vegetable world.

It is generally easy to distinguish between the corolla and calyx; but there are cases in which it is very difficult. Color is the ordinary mark of distinction, the calyx being usually green, the corolla of a brighter hue. But the calyx of the fuchsia is of a bright scarlet; the involucrum of the cornus florida, or dogwood, consists of four leaves of a delicate pink color, which are easily mistaken for petals; while in some plants the corolla is green. Frequently one of these organs is wanting; and in such cases the general term perianth is applied, as in the tulip and lily.

The situation of the corolla in respect to the *germ*, or future seed, is an important consideration, and is a mark of distinction in determining the genus of a plant. If above the germ, it is said to be *superior*; if below, it is *inferior*. A flower without petals is called *apetalous*. When the

number of petals is less than twenty, they are called *definite*; when it exceeds twenty, they are *indefinite*. If composed of one piece, it is *monopetalous*; of more than one, it is *polypetalous*.

Monopetalous corollas consist of three parts, the *tube*, *throat*, and *limb*. The *tube* is the lower part, and has more or less of a cylindric, or funnel-form. The *throat* is the entrance into the tube; it is *open* in the morning-glory, or *closed* with scales or hairs. The *limb* is the upper part of the corolla.



CAMPANULATE.

*Campanulate*.—Of the monopetalous corollas, we have the *campanulate*, or bell-form, with the tube indistinct, the corolla spreading from the base, as the bluebell, harebell, hyacinth, etc.; also *funnel-form*, having a tubular base, and opening in the form of a funnel, as the morning-glory and four-o'clock.



SALVER-FORM.

The *Salver-form* has a flat, spreading border, proceeding from a long tube, as the feather-leaf, lichnidia. *Wheel-form*, having a flat border, without a tube, or with a very short one. Examples of this kind of corolla may be found in the mullen and loose-strife.



LABIATE.

The *Labiate* corollas consist of two parts, resembling the lips of an animal. Labiate corollas are *personate*, when the throat is closed, or *ringent*, with the throat open. Examples of the first may be found in the snap-dragon (*antirrhinum*); of the second, in the chelone, or snake-head, a plant found in marshy meadows.

Polypetalous corollas consist of petals. Each petal is composed of two parts, the *lamina* and *claw*. The

*lamina* is the upper and broader part of the petal; its margin is *entire* in the rose, and *crenate* in the pink. The *claw* is the lower part of the petal, and is slender in the pink, and short in the apple.

Polypetalous corollas are *cruciform*, when consisting of four petals of equal size, arranged in the form of a cross, as the radish and turnip. They are *caryophyllous*, when having five single petals, each terminating in a claw, as in the pink; *liliaceous*, with six petals spreading gradually from the base, giving a bell-form appearance, as the tulip and lily; *rosaceous*, when formed of five roundish petals, with short claws, as the rose and apple; *papilionaceous*, when composed of several irregular pieces, and supposed to resemble a butterfly in appearance, as the pea and locust.

Sometimes the corolla partakes of the characteristics of several of these forms, and occasionally it has a form different from those described; in the latter case it is called *anomalous*.

One important office of the corolla is to protect those delicate organs, the stamens and pistils. It also elaborates that peculiar oil which gives flowers their odor. But its most obvious purpose is to beautify creation; "for Solomon in all his glory was not arrayed like one of these."

### A WORD TO BOYS.

Boys, did you ever think that this great world, with all its wealth and woe, with all its mines and mountains, its oceans, seas, and rivers, with all its shipping, rail-roads, and magnetic telegraphs, with all its millions of men, and all the science and progress of ages, will soon be given over to the hands of the boys of the present age. It will be so. Believe it, and look abroad upon your inheritance, and get ready to enter upon your possessions.

## For Children.

"To aid the mind's development, and watch  
The dawn of little thought."

### JOHN GRAY AND HIS HAT.

JOHN GRAY was nine years of age, when he went out one day to walk in the fields with his pa-pa.

The wind blew ver-y hard, and they had not gone far when John's hat came off.

"John," said his pa-pa, "why can you not keep your hat on your head?"

"Why, pa," said John, "I have no string to my hat."

"Where is the string, John? You once had one; have you lost it since we came out?"

"No, pa, I have not lost it; I left it at home. It came off the last time I wore my hat. I did not think to put it on, and so I came out with-out it."

"This is wrong, John, and shows a want of care on your part. You should have had the string put on your hat at once, when it came off.

"This is the first time you have done thus, and I hope it may be the last. If you come out again with-out a string, I must send you back."

"I will be sure, pa, not to do so a-gain."

John was a kind boy, but he was too care-less, and oft-en would put off do-ing things which he should do at once.

This hab-it gave him much trou-b-le, till he got rid of it. So it will give ev-e-ry lit-tle boy and girl trou-b-le, if they have it and do not get rid of it.

In a few days John's pa-pa and mam-ma were go-ing to see a friend, and his pa-pa said to him, "Come, John, you may walk with us; but be quick, for we are in haste."

John ran up stairs to dress in great haste, and in his hur-ry he for-got the string to his hat, a-gain.

The wind blew ver-y hard on this day, too; and John soor found that he could not keep his hat on with-out hold-ing it with his hand.

He said noth-ing about it, but went on with one hand on his hat.

At length his hand got so cold that he could scarce-ly feel his hat. He had gloves in his pock-et, but in his haste he did not put them on.



When he could en-dure the cold no long-er, he took his hand from his hat to put on his gloves. Just then a gust of wind came, and off blew his hat.

He ran to pick it up, but still it blew on, and on, and on. John ran on, and on, and on; but it kept out of his reach for a long time.

At last, just as he came up to it, he hit his foot against a stick, and fell in the mud.

Now his hat blew on again, and was soon far away from him.

Just then a good boy came a-long, and, see-ing John fall in the mud, helped him up, and then ran to stop the hat.

He soon brought the hat, and John went back where his pa and ma stood. His clothes were mud-dy from head to feet.

His pa-pa now said, "John, you must go home. I told you the last time you went out with me, that the next time you came out with no string on your hat, I must send you home."

"You have been care-less not to get the string put on your hat; now you see how sad has been the re-sult of your neg-lect."

John felt that he had done wrong, and went home, re-solved to be more care-ful in fu-ture.

It was a good les-son for him, and one that he nev-er for-got.

## THE LITTLE BOY WHO WANTED MANY THINGS.

ONE day as a lit-tle boy was sit-ting by his mam-ma, he said, "Mam-ma, I wish I had a lit-tle gar-den of my own; for oft-en when I want a flow-er I am a-fraid to take one of yours, lest I should do wrong. May I have a gar-den, mam-ma?"

"Yes, you shall have a lit-tle gar-den," said his mam-ma. And she told the gar-den-er to make one for him.

Well, the lit-tle boy was ver-y much pleased with his gar-den, for a day or two; then he be-gan to wish for some-thing else.

And he said to his mam-ma, "I wish I had some rab-bits; I want some-thing to a-muse me."


So his mam-ma bought him three pret-ty lit-tle rab-bits, and a nice house to keep them in.

Now, for two weeks, the boy thought he loved his rab-bits ver-y much. He fed them well, with clo-ver, dried ap-ples, and bran. He took all his play-mates to look at them.

But at the end of two weeks he wished that he had nev-er seen the rab-bits, for they on-ly teased him.

So he said, "Mam-ma, I wish you would let me have a lit-tle dog; for you know, though my

rab-bits are pret-ty crea-tures, they can not go out with me when I walk, nor seem glad and fond of me, as a dog can."

Then his mam-ma bought a lit-tle dog for him. And  when this boy saw his dog, he was so much pleased that he said he nev-er could get tired of him.

For ma-n-y weeks the boy took the lit-tle dog wher-ev-er he went, and played with him when-ev-er he had a spare mo-ment.

The lit-tle dog be-came ver-y fond of him, and oft-en fawned up-on him.

If his paws were not clean when he jumped up-on him, the boy did not think it a-ny trou-ble to brush the dirt from his clothes.

But, af-ter a time, he be-gan to grow tired of this pret-ty crea-ture, and to be ver-y cross with him.

If the dog jumped up-on him as he used to do, when his feet were not clean, the boy would kick him, and say that he was a dir-ty dog.

But the dog was not so un-kind as his mas-ter, for when scold-ed and beat-en he on-ly licked the hand which gave the blow, and grieved be-cause a change had come o-ver the heart that once had loved him.

One day the boy said to his

mam-ma, "I wish I had a po-ny, I am tired of my dog. May I have a po-ny, mam-ma?"

"No, my son," re-plied his mam-ma; "I do not in-tend to give you any-thing more un-til you have learned to love the things you now pos-sess.

"I gave you a gar-den full of flow-ers, and it is now over-grown with weeds. I al-so gave you three pret-ty rab-bits, which you have not looked at for the last six weeks.

"Then, last of all, I gave you that lit-tle dog, of which you thought you could nev-er get tired; but of late I have been grieved to see you tease your dog in a cru-el man-ner.

"There-fore you need not ask me to give you any-thing else, for I shall not do it until I see you a wi-ser and bet-ter child."

This made the lit-tle boy feel a-shamed, and he went to his own room, feel-ing ver-y sad.

Af-ter much thought, he went out and be-gan to weed his gar-den, and once more went to look at his rab-bits.

From that day his mam-ma had the pleas-ure of see-ing her boy an al-tered child.

His gar-den was clean-ly weed-ed, his rab-bits nice-ly fed, and of his lit-tle dog he be-came fond-er than ev-er be-fore.

When his mam-ma was quite sure that he had be-come a bet-ter boy, she bought him a pret-ty black po-ny. Here the boy is, on his back, ri-ding at full speed.



Now he is quite hap-py, but he does not neg-lect his gar-den, or his rab-bits, or his dog; but each share his at-ten-tive care.

You have now read the sto-ry of the "Lit-tle boy who want-ed ma-ny things;" but we have not told you his name. Can you guess who this boy was?

If you do not know him, per-haps you know some one like him; if you do, let him read this sto-ry. We hope he will then be-come like the lit-tle boy you have just read a-bout, when his mam-ma gave him the po-ny.

## AUNT ELIZA'S STORIES.—NO. II.

### LITTLE ALICE.

**B**RIGHT, merry June has come, with its sweet roses, its blue sky, and its dark green grass. I see the sportive lambs frisking gayly in the fields. Now they leap from some broad rock, and now they roam over the tender grass.

Dear little lambs, how mild

and good they are! I wish all little children were as gentle as the lambs.

I see the shadow of the clouds pass swiftly over the bending wheat, whose dark green surface waves like the restless sea. Come, little children, lay down the ball, the hoop, and the rope.

Look up to the blue sky, where the fair, white clouds are floating along; hark to the burst of joy that comes from tree and hill-side; see the broad leaves of the wavy corn, and the fast ripening cherries peeping out from their hiding-place; look over the wide world, and say, do you not love the dear Father whose kind hand has spread the earth with beauties, and has given us this bright world for our dwelling-place?

I knew a little girl, whose eye was ever ready to see the beautiful things our God has made. She looked upon the fair earth, and on the angel stars, and she said in her little heart, "My Father, made them all;" and seated at her mother's feet, she would raise her meek, blue eyes, and ask of heaven, the spirit home—

"Is it more beautiful than earth, mother? And shall we all be good and happy there?" she would say. "Oh, mother!

little children will be there; for the dear Saviour has said, 'Of such is the kingdom of heaven.'"

The roses of six bright summers had withered at her feet, and the buds of the seventh were just unfolding, when this little Alice lay down to die.

Gently she begged her friends not to mourn for her: "Do not look so sad; I am only going home," she said; and she asked to look once more on the blue sky and the pleasant earth.

They carried her to the window, where the sweet roses were clustering around. Slowly the sun sank in the west, and gentler and lower grew the breathing of the dear child.

At length a large, pale star came meekly out, in the fading west, and the eye of the child rested on it. No sound was heard in the room; brighter and brighter grew the star, and little Alice was in heaven.

They twined pale rose-buds in her fair ringlets, and laid her to sleep by a pleasant stream, and over her fair form bloom the white lily and the moss-rose; but her parents know that her pure spirit dwells in heaven.

#### THE ECHO.

**L**ITTLE George had not yet the least idea of an echo. One day, he happened to cry out in the fields, "Ho! ho!" and he instantly heard

the same words repeated from the neighboring thicket near him.

Surprised at the sound, he exclaimed, "Who are you?" upon which the same voice also returned, "Who are you?"

George cried out, "You must be a very foolish fellow." "Foolish fellow!" repeated the voice from the thicket. George then began to grow angry, and he uttered words of defiance toward the spot from whence the sound proceeded.

The echo faithfully repeated all his words. Then George, in order that he might avenge himself, searched through the wood for the boy, who he supposed was mocking him; but he could find nobody.

After searching in vain for some time, he ran home, and complained to his mother that a wicked boy was concealed in the wood for the purpose of mocking him.

"Ah, now you are complaining of your own self," replied his mother. "Know that you have heard nothing but your own words; for even as you have seen your face reflected in the clear water, so you have just heard your own voice in the woods.

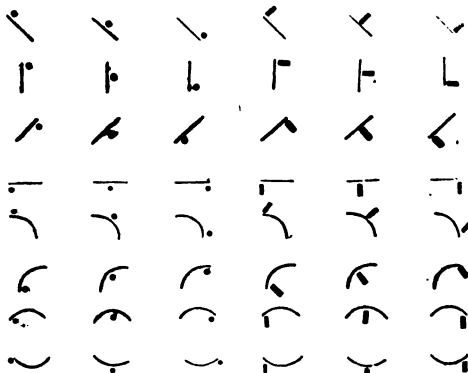
"If you had uttered an exclamation of kindness, you would have received the same in reply."

It is thus in every-day life. The conduct of others toward us is generally an echo of our own.—*Selected.*

# Phonography.—Lesson 2.

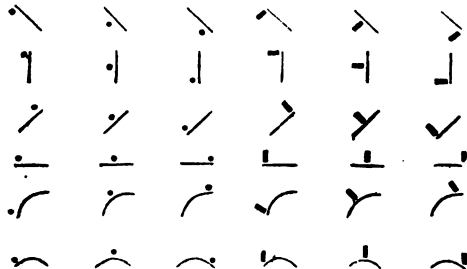
## FIRST EXERCISE.

### LONG VOWELS FOLLOWING CONSONANTS.



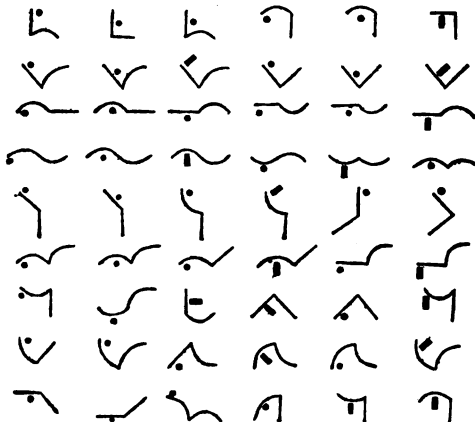
## SECOND EXERCISE.

### LONG VOWELS PRECEDING CONSONANTS



## THIRD EXERCISE.

### WORDS CONTAINING TWO CONSONANTS.



The following are the words written in phonography in the First Exercise, viz.:

- 1st line, pea, pay, pā, paw, po, poo.  
 2d " tea, ta, tah, taw, tow, too.  
 3rd " che, cha, chā, chaw, cho, chew.  
 4th " key, ka, kah, caw, ko, coo.  
 5th " re, ray, rah, raw, row, rue.  
 6th " lee, lay, lā, law, low, loo.  
 7th " me, may, mā, maw, mow, moo.  
 8th " knee, nay, nah, gnaw, no, noo.

Words spelled by the phonographic characters of the Second Exercise, viz.:

- 1st line, eep, ape, āp, aup, ope, oop.  
 2d " eat, ate, āt, aught, oat, oot.  
 3rd " each, aitch, āch, auch, och, ooch.  
 4th " eke, ache, āk, ank, oak, ook.  
 5th " eel, ale, āl, all, ole, ool.  
 6th " eem, aim, ām, awm, ome, oom.

### JOINING OF CONSONANTS.

When consonants are combined to form words, they should be written without taking off the pen; the second consonant sign commencing where the first one ends, the third at the end of the second, and so on. This will give the skeleton, or frame of the word, to which the vowels are afterward to be affixed.

An exception to the general rule of writing consonants, is allowed in the letter *r* when joined to other consonants; in which position it is struck upward in an angle like the *ch*. But it is then readily distinguished from *ch*, by its being struck upward, while that letter is always struck downward. This is a convenience to prevent words from running too far below the line, and to give more variety of forms.

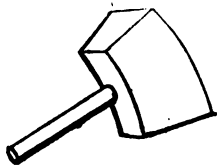
Words contained in the Third Exercise, viz.:

- 1st line—teem, take, tame, meet, mate, coat.  
 2d line—peel, pale, pall, peer, pair, pore.  
 3rd line—meek, make, came, keen, cane, comb.  
 4th line—mean, mane, moan, name, known, maim.  
 5th line—peat, pate, feet, fought, teach, peach.  
 6th line—meal, male, mear, more, keel, call.  
 7th line—neat, nail, tone, rope, reap, naught.  
 8th line—fear, feel, reef, loaf, leaf, fall.  
 9th line—cape, care, ream, late, note, mote.

## Drawing Department.



*Bridge.*



*Mallet.*



*Eye.*

OWING to its being so soon after the commencement of the summer term in most country schools, we have not received our usual supply of drawings for exchanges during the past month; but we shall expect them in greater abundance during the month of June.

In our northern latitudes, this is the leafy month; the time when forest and field, tree and plant, have put forth their full-grown leaves, in all the beauty and loveliness of their first freshness. It is the time, too, when Flora decks the earth most profusely with flowers. What season more fitting than this for hieing away to the fields and woods, to study the beauties of the vegetable world, as presented in leaves and flowers?

You, who are engaged in studying botany, will now find the most abundant attractions; for at this season more flowers adorn the earth than at any other during the year. You, too, who would preserve the forms of leaves, which you find on different plants, begin now, when the leaves are so fresh. And for the benefit of those who wish to engage in this interesting employment, we give the following

### DIRECTIONS FOR TAKING LEAF IMPRESSIONS.

Hold oiled paper in the smoke of a lamp, or of pitch, until it becomes coated with the smoke; to this paper apply the leaf of which you wish an impression, having previously warmed it between your hands, that it may be pliable. Place the lower surface of the leaf upon the blackened surface of the oil-paper, that the numerous veins, which are so prominent on this side, may receive from the paper a portion of the smoke. Lay a paper over the leaf, and then press it gently upon the smoked paper, with the fingers, or with a small roller (covered with woolen cloth, or some like soft material), so that every part of the leaf may come in contact with the sooted oil-paper. A coating of the smoke will adhere to the leaf.

Then remove the leaf carefully, and place the blackened surface on a sheet of white paper, not ruled, or in a book prepared for the purpose, covering the leaf with a clean slip of paper, and pressing upon it with the fingers, or roller, as before. Thus may be obtained the impression of a leaf, showing the perfect outlines, together with an accurate exhibition of the veins which extend in every direction through it, more correctly than the finest drawing. And this process is so simple, and the materials so easily

obtained, that any person, with a little practice to enable him to apply the right quantity of smoke to the oil-paper, and give the leaf a proper pressure, can prepare beautiful leaf impressions, such as a naturalist would be proud to possess.

Below is another, and we think a better method of taking *leaf impressions*, than the preceding one. The only difference in the process consists in the use of *printing ink*, instead of smoked oil-paper.

**LEAF PRINTING.**—After warming the leaf between the hands, apply *printing ink*, by means of a small leather ball containing cotton, or some soft substance, or with the end of the finger. The leather ball (and the finger when used for that purpose), after the ink is applied to it, should be pressed several times on a piece of leather, or some smooth surface, before each application to the leaf, that the ink may be smoothly and evenly applied.

After the under surface of the leaf has been sufficiently inked, apply it to the paper, where you wish the impression; and, after covering it with a slip of paper, use the hand or roller to press upon it, as described in the former process. Under each leaf should be written the name of the plant or tree on which it is found. And if a brief description of the tree or plant could also be given, it would add much interest to this department.

Thus, with leaves gathered from nature for types, the finger or a simple ball for an ink-roller, and the hands for a printing press, the little boys and girls may establish printing-offices of their own, where they can print and send out as exchanges their own papers, and receive others in return.

These impressions may be sent to all parts of the Union, and even to other countries, and like impressions received in return; thus giving persons an opportunity of seeing the correct form and size of leaves growing on various plants in different parts of the world, and an accurate description of each. These, if preserved in a volume for leaf impressions, will enable one to obtain a valuable collection in a few years.

Such exchanges may be carried on between friends as well as schools. Ladies may engage in this, and those who are pursuing the study of botany should not fail to do so. It will add more interest to the study, and furnish many interesting incidents for the interchange of thought be-

tween distant friends. An employment of this kind exhibits a far greater refinement of taste, and love for the pure and beautiful in nature, than to paste pictures, and scraps of prose and poetry, in a book; or to collect in an album the wit and good sense of others, which too often prove but foolish flattery and nonsense. The possession of costly engravings, and elegantly illustrated books, indicates a full purse rather than a well-stored mind. Well-executed drawings, and leaf impressions, show the taste and knowledge of those who execute them; and more especially so when accompanied with a brief description.

What schools and families will establish such a printing press as we have described? These impressions, when prepared for exchanges, may be made on two pages of whole sheets of unruled letter paper; each page containing several leaves. Or they may be sent on small pieces, as described for the drawings in our drawing department for last month.

Any school that will send us *five* neat leaf-printed papers, each containing one or two sheets of letter paper, with leaf impressions on two pages of each sheet, as already described, shall be entitled to "The Student" for one year from the first of May; also to at least three sheets of the leaf impressions which we receive from other schools. The leaf impressions may be forwarded to us at any time before the first of November next, and they should be sent as often as once each month. The *POSTAGE must be paid*, in all cases, by the persons sending us the leaf impressions.

Now, boys and girls, leave your play for an hour or two, prepare your printing presses, and send us your exchanges.

During the past month we received another package of good drawings from Mr. J. M. Horton's pupils, of North Castle, N. Y. We notice among them the names of new pupils, who have sent us some of their first attempts at drawing; and with the many good examples they have around them, and the instruction of Mr. Horton, they can not fail to make good improvement.

Another package from the pupils of Miss Cynthia Osborn's school, North Hempstead, L. I. We are glad to see that these pupils persevere in drawing, and are making improvement; but why don't they take The Student?

We have recently sent several of the drawings, received as exchanges, to England, to be distributed in some of the schools of London, with the hope that the pupils there will send us similar drawings in return. Should we receive any from that source they will be distributed among our young friends in the United States, who are so much interested in drawing.

Each month, cuts will be given in the drawing department, which we wish all the boys and girls, who read The Student, to draw on paper; and we should be pleased if they would also copy all the illustrations in each number.

## Editor's Table.

### TO TEACHERS.

A MONTHLY SCHOOL-READER. "What! introduce a monthly periodical into school, as a reading book?" exclaim some who see The Student for the first time. Yes, reader, it *has already* been done, and used most successfully, too, in many schools throughout the country, for more than two years. The usefulness of periodical reading adapted to the various classes in school, is no longer an experiment, but an acknowledged fact by all who have tested it. Such a periodical, arriving each month, filled with new and interesting reading, can not fail to awaken an interest in the minds of children.

And to you, teachers, we look for much aid in enabling us to place The Student in every family of children throughout the land. It is to you that parents are looking for the education of their children; in you children place their confidence, and through you improvements in school instruction are to be introduced. How important, then, that you study the best interests of your pupils, and give them that education which is practical, and adopt the means best calculated to attain that end.

We offer you The Student as an important assistant in your labors, and ask that you will do us the favor of giving it a careful examination, and a fair trial. If you will do this, and observe the following hints in regard to its use, we shall most willingly hear your decisions.

Teachers should take charge of The Students, handing them to their respective owners when to be used for reading; and when not in use keep them at their desks.

It may be used as an occasional reader, say for three days each week, and the usual reading books during the remainder of the time; or it may be read from the first of the month until it has been read through once or twice, and then laid aside for the other reading books, until a new number arrives; or, as it is now used in many schools, may be made the only reading book. Usually one copy will be sufficient for each family.

The numbers should be carefully preserved by the pupils, and occasionally the articles contained in former ones re-read.

Being now soon after the commencement of the summer term of your schools, and only the second number of the volume, it is a most favorable time to introduce the work.

## THE WAY TO CONTENTMENT.

BISCHOFF.

Allegro.

1. Let us with a cheerful mind, Lead our life up-right-ly; Virtue's paths e'er tak-ing,

2. Let us banish lust and pride, Living pure and hum-ble; Giv-en to all well-doing,

Chorus.

All that's ill for - sak - ing. Come let us all u - nite in this, And so contentment

Eve-ry vice es - chew - ing: Come let us all u - nite in this, And so contentment

we'll possess, And then we'll all be glad,\* glad, glad, And then we'll all be glad.

we'll possess, And then we'll all be glad,\* glad, glad, And then we'll all be glad.

3.

Let us ever cherish truth,  
Truth is worth possessing;  
Let us live uprightly,  
Hourly, daily, nightly.

CHORUS. Come let us, &c.

4.

Let us seek in all we do,  
Solid, lasting treasure;  
Good we e'er may cherish,  
Good that will not perish.

CHORUS. Come let us, &c

\* At the words, *glad, glad, glad*, the hands may be clapped.



## PRACTICAL HINTS TO TEACHERS.

## READING.

It has often and justly been observed, that very few persons read well. To read simply and naturally, with animation and expression, is indeed a high and rare attainment. To attain a correct pronunciation, a proper tone of voice, and the right inflections, such as will convey clearly to the minds of those who listen, the real sentiments and ideas which the writer intended should be conveyed, is a degree of perfection in the art of reading that few, very few, ever arrive at.

Besides, what is by many called *good reading*, is far from it. We mean that which calls the attention of the listener from the subject of the discourse, to the supposed taste and skill in pronouncing it. As the best window is that through which the light passes most freely, and affords the most natural view of the landscape without, so is he the best reader who brings before us the mind of the author, unencumbered by the tints and tracery of his own style and manner. Still, it must be remembered that with most persons reading is AN ART. The best readers are those who have most diligently studied their art; and yet studied it so well that you can scarcely perceive that they have studied it at all. You so thoroughly understand, and so sensibly feel the force of what they read, that you never think *how* they are saying it.

The principal reason why there are no more good readers is owing to defects in education. The error begins with teaching the alphabet. This is often an unmeaning exercise; nay, in the great majority of schools it is a tedious affair to children. The child is called out and required to repeat the alphabet from A to Z, and from Z to A, alternately, day after day, week after week, and, in many instances, this is continued for months; after which the pupil is set at reading "bla, ble, bli,"—those unmeaning and worse than useless monosyllables. Instead of this the child should be taught ideas, and words which convey ideas, at first. For example; at the first lesson the pupil may be taught the letter *a*, then the letter *z*, and next the word *az*. At the second lesson he may be taught *a*, and then the word *ax*; or *o* and *y*, which, with *a*, learned at the first lesson, forms the word *boy*. Thus he learns words that convey thoughts to his mind, and from the conversation of the teacher concerning them, and the questions asked, he finds, at the first lessons, that learning the alphabet, and learning to read, are not dull, monotonous, meaningless tasks. He becomes at once interested; hence can not fail to improve rapidly.

It is during the early training of children that the greatest fault in teaching reading consists. Bad habits then formed are exceedingly difficult to get rid of. But as teachers will not only have scholars who have not been taught at all, but those who have been taught badly, the inquiry naturally arises, "How can we make good readers of those who now read *badly*, as well as those who can not read at all?" In reply we give a few rules, which, if observed, will be of much service in suggesting modes of teaching reading successfully.

Be sure that the pupil thoroughly understands what he reads. Probably there can be no one direction given, which is of more importance, especially in teaching children, than this. Attention to it will sweep away

those unmeaning combinations before alluded to, such as "blo, blu, dac, hec," and all the rest of this ridiculous tribe, found in nearly every spelling-book. It is in reading these that a habit is formed of separating the sight and sound of words from the sense; and this habit once formed, clings to the mind long after the years of childhood have passed away.

Here, then, while teaching the first principles of reading, is the place to commence the observance of the above rule. This is absolutely essential to success. Indeed, it is during the child's first instruction that the habit of fully comprehending in the mind that which is presented to the eye, must be formed. So with the more advanced pupils, if you would have them read well, *they must understand what they read*. How can a person be expected to express the language of a thought properly, if he does not comprehend the thought itself? If, therefore, you would have a sentence well read, read so as to be understood and felt by the hearer; take care that the reader himself both understands and feels it.

Remember that the tones and emphasis which we use in conversation are those which form the basis of GOOD ELOCUTION. Children should therefore be instructed to read as they talk; particularly in regard to emphasis and inflection. But there are some children who talk so badly that they can scarcely be understood. This is owing to defects in articulation. To remove this habit, we know of no better way than thorough drilling in uttering the elementary sounds of the language. This may be practiced, at first, by the class in concert, then by each pupil singly.

The first exercise should be pronouncing the word, then the vowel sound in the word, as follows: *a*, *e*; *arm*, *a*; *all*, *a*; *at*, *a*; *eat*, *e*; *bet*, *e*; *ice*, *i*, etc. Then the sub-vocals should be spoken in the same manner, thus: *ebb*, *b*; *odd*, *d*; *him*, *m*; *buzz*, *z*. Then the aspirates: *up*, *p*; *it*, *t*; *sin*, *s*; *thin*, *th*. When these have been well learned, words should be pronounced and spelled by sounds, as: *m...a...n*—man; *d...a...y*, *e...t*—eat. These exercises will give a command of the organ of articulation, and teach the habit of speaking distinctly. For further information on this subject, teachers will do well to examine "Comstock's Elocution," "Town's Grammar School Reader," or the "Normal Chart." Thus much for *articulation*; the emphasis and inflection should be the same as used in conversation. Nature takes care of them there, and she may be trusted to direct them in reading, when the subject is understood. If rules for these are used they should be observed only as they teach nature's ways, and make it more easy to follow them.

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# THE STUDENT.

## IMPORTANCE OF MENTAL CULTURE

BY S. D. BURCHARD.

**M**ANY causes contribute their influence in deciding what a man's condition will be. It is never a matter of pure accident. The right of primogeniture, or the whim of a dying monarch, may make a king, but can never make one of nature's noblemen. Other causes must operate, if man would ever rise and shine with luster. Among these causes is exalted intelligence. This has done more to elevate man, and give him influence in the world, than all the incidents of rank and birth.

It fits a man to fill the higher spheres of society. All spheres of life that are useful are honorable; but all are not on a level, in the estimate of the world, or in their actual importance to mankind. Some are, and will be, higher than the rest. The man who digs the earth fills an honorable vocation; but he that makes laws for a nation, or writes a book for the world, occupies a place higher and more important. His influence is broader, and lasts longer.

For these higher spheres, enlarged intelligence is an indispensable prerequisite. Its absence is as complete a barrier as the strongest bolt would be to a feeble arm. In this respect no man can rise above his level. He can never soar to the heights of influence and moral power. Ignorance is like a mountain on his shoulders. He must shake it off, or sink beneath its weight.

He may pour out the dolorous notes of envy as he views the ascending movement of others, but this is as idle as it is profitless. He must break the chain that binds him. Then he may rise by his own elasticity, take his stand on the eminence of social life, and not die without having done something which is worth remembering. The page of history will give him place among the honored dead.

Cultivated intelligence qualifies a man to rise from humble life to influence in the world. Men are constantly changing places in society. The descendants of honorable parentage often sink to degradation, in spite of the advantages of birth. And how often has a young man risen from obscurity and poverty, gathering impetus by his movement, left his superiors in fortune far behind him, and, by his own unaided efforts, placed on his brow a deathless laurel. History is replete with narratives of such facts.

Robert Burns, who wrote and sung for posterity, was born in the vale of poverty. Franklin was a printer, and afterward the prodigy of the world. And of the sages of that august assembly which severed these states from the mother country, two, who were selected to draw that immortal instrument which declares us free and independent, were mechanics; they had attained their acknowledged eminence among their fellow-citizens by no superiority of early advantages.

Are these, then, the achievements of ignorance or knowledge? The former never soared so high. It has no tendency to climb the heavens; it grovels in the dust. Knowledge is the ascending, the expansive element. It fits a man for all the emergencies of life. A cultivated mind can do more things, and do them better, pass from one sphere of activity to another with vastly more facility, than an uncultivated mind. It has flexibility, sail, and ballast, and is well rigged for a contest with the fortunes of time; a mind freighted with intelligence can sail over any ocean.

It is of valuable service to a man in the pursuits of worldly business. I do not intend here to urge the sordid motive of money-making, as a reason for intellectual

improvement, but to illustrate the fact that superior intelligence always contributes to increased prosperity in business. The time has been when the converse of this maxim was held to be sacred, that the more ignorant a person was, the better, at least for his employer.

Such a principle befitted feudal times, and was twin sister of the maxim, that ignorance is the mother of devotion. But the progress of knowledge has exploded them both. In all well-informed communities, it is now universally admitted that the labor of intelligent, free, independent operatives is far more productive than that of ignorant serfs. This doctrine is advocated by the most distinguished economists.

An intelligent agriculturist, one who understands the nature of different soils, the best mode of cultivation, and the proper rotation of crops, will be far more successful in business than one who is ignorant of the scientific principles of husbandry. The intelligent merchant more readily perceives those tides in human affairs which bear men on to fortune, than he who knows but little of the state of the market, and the condition of the world.

The mechanic whose mind is cultivated will, other things being equal, be the most skillful in the prosecution of his work, will command the highest wages, and be the most profitable to his employer. The principle of sound political economy, therefore, presents a cogent and powerful inducement to mental culture.

Cultivated intelligence will always gain attention. It is sought when counsel is needed; it is consulted in the various enterprises of life; it is respected wherever it is seen. It is the richest legacy that a parent can confer upon his children; a legacy of which no man, no vicissitudes of fortune, can rob you. It never takes to itself wings and flies away; it is subject to no decay. It will endure when the world expires, and, if sanctified by the grace of God, it will rise and flourish in perpetual, everlasting day.

But need I say that, if you would ever rise to eminence, if you would ever become great, wise, or good, you must commence

the work of preparation now; you must lay the foundation in early life? If you pass the season of youth in idleness or dissipation, if you form no habits of close and accurate thinking, if you are content to float upon the surface of things, but little can be expected of you in manhood, and less in old age.

But if you improve your minds, if you leave your hearts in the fountain of heavenly truth, you will not disappoint the hopes of the world. You will be capable of doing something for your race. You will be useful in the different spheres in which you may be called to move. And when you shall have finished your earthly career, a voice will be heard, saying, "Come up hither, thou good and faithful servant; because thou hast been faithful over a few things, I will make thee ruler over many things; enter into the joy of thy Lord."—*Selected.*

[*Primo-geniture*, in law, the right which belongs to the eldest son or daughter. In Great Britain, the right of inheriting the estate of the father belongs to the eldest son; and in the royal family, the eldest son of the king is entitled to the throne by *primogeniture*. Among the females, the crown descends by right of *primogeniture* to the eldest daughter only, and her children. *Robert Burns* was a Scottish poet of great genius; but we regret that it may be added he was dissipated in morals. He was born in the town of Ayr, Scotland, and died in 1796, at the age of 37 years. *Franklin* (Dr. Benjamin Franklin), a distinguished American philosopher and statesman, was born at Boston, 1706; he died in April, 1790. *Feudal*, pertaining to the right of a person to lands held in trust, on condition of his performing certain obligations to the owner or lord. Such a state of things exists in some of the European countries; the person tilling the soil being only a tenant, and liable to be removed. *Serf*, a name given in some parts of Europe to servants or slaves employed in husbandry. Sometimes they are attached to the soil, and transferred with it.]

### FAULTS.

"WHAT are another's faults to me  
I've not a vulture's bill,  
To pick at every flaw I see,  
And make it wider still;  
It is enough for me to know  
I've follies of my own—  
And on my heart the care bestow,  
And let my friends alone."



### BARON VON HUMBOLDT.

BY N. ALLISON.

**F**REDERICK HENRY ALEXANDER VON HUMBOLDT was born at Berlin, Prussia, on the 14th of September, 1769. He was educated at Gottingen and Frankfort-on-the-Oder. In 1790 he visited Holland and England; and during the same year published his first work, entitled, "Observations on the Basalts of the Rhine." He went to Freyburg in 1791, to receive instruction in botany and mining from the celebrated Werner.

During the following year he was appointed assessor in the mining and smelting department. Soon afterward he received the appointment of overseer of the mines in Franconia. Here he introduced a variety of improvements. But in 1795

he resigned his office, to gratify an insatiable desire to travel. During this year he visited Italy and Switzerland.

In 1797 he went to Paris, where he formed an acquaintance with M. Aimé Bonpland, who afterward became his associate traveler. From Paris, Humboldt set out for Madrid, with a good collection of instruments; for he had for several years cherished the design of traveling within the Tropics at his own expense.

In 1799 the court of Spain granted him permission to travel through the Spanish colonies in America. He immediately sent for his young friend Bonpland, who lost no time in joining him, and they set sail from Corunna, for America.

The plan of travel which these two friends sketched for themselves was laid out upon a more extensive scale than that of any journey before undertaken by private persons. Five years was the period in which they proposed to explore distant regions, and in that space of time, probably no two individuals ever collected so much useful information, and returned home so richly laden with oblations destined for the altar of science.

They took home with them, on their return in 1804, an herbarium containing more than 6000 species of plants. The preparation of the observations made during this tour, and the publication of works relating to it, occupied the time of these travelers for several years after their return home. The various works relating to this journey comprised seventeen folio and eleven quarto volumes, well illustrated.

The results of this expedition have been of the highest importance to science. In natural history, especially, these observations of six years exceed anything that have been presented by the most successful investigators of this field during a whole lifetime. His valuable works on the subject of plants alone form an era in the history of botany.

In October, 1818, Humboldt visited London. For several years afterward he was a resident of Paris, and there devoted himself to the sciences.

During the winter of 1822, the king of Prussia called Humboldt to accompany him on a journey through Italy. While residing at Naples, his attention was directed to inquiries concerning the formation of volcanoes; the result of which he gave to the public in a small essay. On finishing this tour he again returned to Paris, where he remained till the latter part of 1826, when he went to Berlin, and delivered a course of lectures on the physical constitution of the globe, which was attended by the court and royal family.

He next undertook an important journey through Northern Asia, as far as the borders of China. In this he was assisted by the Russian government, which wished to obtain, through him, more correct information respecting the character and contents of the Ural mountains. On his

return he published an account of his researches in those regions.

In 1845 he published the first volume of the "Cosmos," and completed it in 1847. This is a valuable contribution to physical science. Another work by him, entitled "Views of Nature; or, Contemplations on the Sublime Phenomena of Creation," has recently been published in London.

Baron Von Humboldt's renown has extended over all parts of the civilized world; and, at the present day, there is not a man of science in Europe whose name is more familiar. And this eminent philosopher is still living, having attained an age of more than fourscore years. Well may he be called the patriarch of modern science.

At the present time he is the friend and companion of the king of Prussia. Though his form is meager with age, and his head whitened by the snows of eighty winters, the vigor of his intellect remains strong. The following sketch will show how he is said to employ his time:

"His time is systematically divided. He rises at six o'clock in winter, and five in the summer. He studies two hours, then takes a cup of coffee, with a light breakfast, returns to his room, and commences the task of answering his letters, of which he receives, yearly, more than one hundred thousand.

"From twelve o'clock until two he receives visits, and returns to work again at two. At four he dines, usually with the king in summer, and at home in winter. From four o'clock in the afternoon until eleven he passes in dining. Frequently he dines at meetings of learned societies, or in company of his friends.

"At eleven he retires to his study, and continues there until one or two, writing his works, or preparing them by study. His best books have all been written at midnight. He spends only four hours in sleep."

Such are the habits of Baron Von Humboldt; one who is at once an astronomer, a physician, a botanist, a metaphysician, an antiquarian, and a philologist; and one who is learned in statistics and political economy.

This assemblage of acquirements, so rarely found united in a single individual, are in him accompanied with sleepless activity of mind, and all the zeal, enterprise, and vigor necessary to give them their full effect. Long after his career shall have terminated, he will be remembered as one of the chief ornaments of his age.

### THE DYING SAILOR BOY.

BY MISS ELIZABETH M. ROBERTS.

Blow on, sweet gales, ye little know  
The message I would have you bear,  
As ye gently kiss my fev'rish brow,  
And play amid my flowing hair.

When ye shall hail my native land,  
Then hasten to my mother's door  
Beside the aged elm it stands,  
That coolly shades the western moor.

There my poor mother anxious waits  
The day I shall return from sea;  
There my dear sister nightly kneels,  
And offers up a prayer for me.

Go, tell my mother I would lay  
My aching head upon her breast  
But on the ocean, far away,  
The waves shall rock my soul to rest.

Yes, ere to-morrow's sun shall rest  
His head upon the distant wave,  
The sea shall close above my breast—  
The sailor boy shall find a grave.

Go, tell my sister, as she twines  
The woodbine o'er our cottage door,  
The sacred threshold shall receive  
The youthful wanderer no more.

And tell her I shall gently sleep,  
Regardless of the sea-bird's cries;  
The mermaids shall my vigils keep,  
And spread my pall, and close my eyes.

Oh, tell her 'twould be sweet to die,  
If she were here to hold my head;  
And when I breathe my latest sigh,  
To gently smooth my dying bed.

With rosy cheek and laughing brow  
I used to woo the evening gale;  
But all is changed and cheerless now,  
My pulse beats low, my cheek is pale.

Mother, if on thy breast reclined,  
My heart would palpitate with joy,  
And all thy cherished hopes would find  
Rest in thy dying sailor boy.

Blow on, sweet gales, for now ye know  
The message I would have you bear,  
And speed 't my native land thy flow,  
Then quickly tell each loved one there.

### THE SMALL, SWEET COURTESIES OF LIFE.

THE following excellent extract from a letter by the late William Wirt to his daughter, contains advice worthy the attention of every young lady. Life is made up of little, and happy they who render the small courtesies of life sweet and attractive:

"I want to tell you a secret. The way to make yourself pleasing to others, is to show that you care for them. The whole world is like the miller at Mansfield, 'who cared for nobody—no, not he—because nobody cared for him.' And the whole world will serve you so, if you give them the same cause.

"Let every one, therefore, see that you do care for them, by showing them what Sterne so happily calls, 'the small, sweet courtesies of life,' those courtesies in which there is no parade; whose voice is too still to tease, and which manifest themselves by tender and affectionate looks, and little kind acts of attention, giving others the preference in every little enjoyment at the table, in the field, walking, sitting, or standing. This is the spirit that gives to your time of life, and to your sex, its sweetest charm. It constitutes the sum total of the witchcraft of woman.

"Let the world see that your first care is for yourself, and you will spread the solitude of the upas tree around you, by the emanation of a poison which kills all the juices of affection in its neighborhood. Such a girl may be admired for her understanding and accomplishments, but she will never be beloved.

"The seeds of love can never grow but under the warm and genial influence of kind feelings and affectionate manners. Vivacity goes a great way in young persons. It calls attention to her who dis-

plays it; and, if it then be found associated with a generous sensibility, its execution is irresistible.

"On the contrary, if it be found in alliance with a cold, haughty, selfish heart, it produces no happy effect. Attend to this, my daughter. It flows from a heart that feels for you all the anxiety a parent can feel, and not without the hope which constitutes the parent's highest happiness. May God protect and bless you.

"Your affectionate father,  
"WILLIAM WIRT."

### ORIGIN AND USE OF COATS OF ARMS.

**I**N early ages of the world, and even among the rudest people, various devices, signs, and marks of honor were used to distinguish the great and noble from the ignoble and vulgar. We find in the writings of Homer, Virgil, and Ovid, that their heroes had divers figures on their shields, by which their persons were distinctly known.

Nations also adopted symbolical signs of distinction, which were displayed on their banners and arms. Thus the national emblem of the Egyptians was an *ox*, of the Athenians an *owl*, of the Goths a *bear*, of the Romans an *eagle*, of the Franks a *lion*, and of the Saxons a *horse*.

Even the North American Indians had their distinctive emblems. Thus the *otter* was the emblem of the Ottawas, and the wolf, the bear, and the turtle, of the different divisions of the Iroquois tribe; and these devices were often painted on the bodies of their warriors.

It is supposed, that in Europe, the use of these symbols and devices originated about the time of the Crusades; and were then principally used, as a common medium, to distinguish the persons who journeyed to the Holy Land from nations speaking different languages. Individuals from the same nation, wearing the same device, all could readily distinguish from whence they came.

The term "coat of arms" probably originated from the circumstance, that the ancients embroidered various colored devices on the coats they wore over their

armor. Those who joined the Crusades had their devices depicted on their shields and banners. To these emblems has been given the name of *heraldry*.

All coats of arms formed according to the rules of heraldry are delineated on shields or escutcheons, which are of various forms, as oval, triangular, heptagonal, etc. The principal parts represented on the escutcheon are the *tinctures* and *charges*. By tinctures is meant the various colors used, as yellow, white, blue, red, green.

Charges are whatever are represented on the field of the escutcheon; the principal of which, in addition to the celestial figures, are the chief, the pale, the bend, the fess, the bar, the chevron, the cross, and the saltier. The external ornaments of the escutcheons are crowns, coronets, miters, helmets, mantlings, caps, wreaths, crests, scrolls, and supporters.

Some escutcheons have nearly all of these ornaments, others have none of them. The supporters are placed on the side of the escutcheon, and are thus named because they appear to support or hold up the shield. This may be seen by the figures in the coat of arms for the state of New York.

### ENERGY.

**E**NERGY is omnipotent. It dispels the clouds that surround the houseless boy of to-day, and to-morrow he is basking in sunshine. It transforms the hovel into a palace. It builds our cities, and converts the wilderness into fields of waving grain. It navigates our rivers, digs the channel which unites lakes with the sea; it whitens the ocean with sails.

It levels the hills, plunges through the mountains, bridges the valleys, and paves the road with iron from city to city, over which teeming thousands are borne with almost incredible speed. It erects the great highway of thought on which the lightning courier conveys messages from state to state throughout the length of our great Union. Energy!—what can it not accomplish?

## Coats of Arms, or State Seals.—No. 3.



### MASSACHUSETTS.

**T**HE seal of the state of Massachusetts is represented by an irregularly-formed escutcheon, on the blue ground of which may be seen an Indian, dressed with belted hunting shirt and moccasins. In his right hand he holds a bow, and an arrow in his left. On the right side of the Indian's head is a white or silver star, for one of the United States.

The crest of the escutcheon is a wreath, from which extends a right arm, clothed, and grasping a broadsword. Around the escutcheon are the words, *Ense petit placidam sub libertate quietem*, "By the sword she seeks peace under liberty."

Massachusetts is the oldest and most populous of the New England states. It was settled by the Pilgrims, who fled from England on account of religious persecution there. On Monday, the 21st\* day of December, 1620, these Pilgrims, consisting of one hundred persons, landed on a bleak and dreary rock, and gave it the name of

Plymouth, in honor of the last place they left in England.

During the cold and desolate winter they suffered much from want of provisions and from disease. Before spring again smiled upon the earth more than one-half of their number perished. Yet, during all this season of suffering, they never repined or repented the step they had taken. Thus, amid the most trying circumstances, were planted the germs from which have originated many of the most distinguishing features of our national character.

Massachusetts is about 120 miles long from east to west, 90 miles broad in the eastern part, and 50 in the western, containing about 7,500 square miles. It is divided into fourteen counties, and contains a population of 850,000. This state has about thirty different railroads, which comprise in all more than one thousand miles. But it contains only about fifty miles of navigation by canals.

Several ranges of mountains, extending from Vermont and New Hampshire, pass through the western part of this state.

\* The 21st day of December is the true anniversary of the landing of the Pilgrims, instead of the 23d, as is usually celebrated.



East of these mountains the country is hilly, except in the southern and south-eastern portions, where it is low, and generally sandy. The valleys of the Connecticut and Housatonic are highly fertile. In the western part of the state are extensive marble quarries at West Stockbridge.

At Quincy, nine miles southeast from Boston, are the celebrated quarries of Quincy granite. From these was obtained the granite for building the Bunker Hill Monument, and many of the public buildings in Boston. The Merchants' Exchange, in Wall street, the Astor House, and Rutgers' Female Institute, of New York, were each built of granite brought from Quincy, Mass.

The capital of the state and principal city is Boston, situated on a peninsula in Massachusetts Bay. This peninsula is about two miles long, and one wide, connected with the mainland on the south by a narrow neck of land, forty rods across. It is also connected with the mainland on the north, west, and south, by bridges.

The harbor of Boston is on the east of the city, and is one of the best in the United States. South Boston, formerly a part of Dorchester, also East Boston, formerly Noddle Island, are now included within the limits of the city. The population of Boston is about 125,000.

From this state are sent out more whale ships than from all the rest of the world. New Bedford and Nantucket take the lead in this enterprise. Lynn is famed for its manufactory of shoes. Lowell is noted for its extensive cotton manufactories, in which are employed vast numbers of females.

The commerce of Massachusetts is very extensive, and in the number of her ships she surpasses any other state in the Union. One great feature of it consists in fisheries, the principal of which are whale, cod, herring, and mackerel fishing.

The provisions of the state for *education* are on the most liberal scale. Every child, poor or rich, can have a good education at the public expense. Besides the common free schools there are *three* state normal schools, also supported by the state, for the education of teachers. With

the means of education thus liberal, and peopled by industrious and enterprising inhabitants, the state of Massachusetts holds one of the most important positions in our Union. She is worthy of being so appropriately styled, the "Bay State."

## UMBRELLAS.

ONE of our exchanges gives the following amusing account of the introduction of umbrellas into England:

"It is not a hundred years since a very eccentric Englishman, named Jonas Hanway, having returned from his travels in the East, appeared in the streets of London, on a rainy day, with a queer 'notion' from China, in the shape of what is now called an *umbrella*.

"Being the first ever seen in England, it attracted such curious and indignant notice, that its owner was soon surrounded by a furious English mob, and pelted with mud and other missiles, for his audacity in attempting to screen himself from the rain which all true-born Englishmen, from time immemorial, had allowed to beat upon them without resistance.


"The incident made a noise, and in spite of ridicule, the 'notion' began to *take* wonderfully with the hitherto bedrizzled people, and being found as useful in protecting against the sun as against the rain, the name of *umbrella*—a little shade—was given it.

"The invention of poor Jonas, so unpopular at first, and afterward so universally adopted, merely shows what a disadvantage it is to be born a few years in advance of the age."

In Iceland, if a minor commits a crime, the parents are immediately arrested, and unless they can prove to the satisfaction of the magistrate that they have afforded to the child all needed opportunities for instruction, the penalty of the crime is inflicted upon them, and the child is placed under instruction.

## A SABBATH MORNING.

BY EZRA D. BARKER.

HERE is a calm and devotional sensation produced in the soul of every attentive beholder as he gazes on the beautiful tranquillity of a clear Sabbath morning; and when he remembers it is a day set apart by the Creator for the bodily rest and spiritual good of the creature, he must feel that its purpose is sacred, and its origin divine.

The cessation of the weekly hum of business and pleasure, and the sweet serenity of a summer Sabbath morning, incline the busy mortal to pause amid the whirl of earth's cares and toils, to stop and meditate. All nature seems conscious of the hallowed hour. The heavens seem deeper and purer, the sun shines brighter, and the earth seems fairer.

Winds come and go, laden with fragrance and melody. Birds, as they soar toward heaven, warble forth glad orisons; bees float through the air, and strike their winged harps to low and pleasant symphonies; and innumerable tiny insects sail upon the breeze, and glitter in the sunlight like living gems, rejoicing in their brief but happy being.

The majestic forest stretches out its countless leafy arms, as if in the attitude of worship, and spirit voices seem talking amid the rustling leaves. The modest wild flower, looking out from the craggy hill-side, or hiding its slender form in the shadowy retreat of the deep ravine, breathes out a fragrant tribute of gratitude and praise, and sends up from its petaled censer the sweet offering of morning dews.

There is a holy calmness in the sky, a solemnity in the air, and an adoring smile on the earth. And now the streams of golden light are glancing from roof and window, and lighting up with cheerful beams the quiet recesses of many a peaceful habitation. He of the furrowed brow and silver hair forgets the ills and jealous anxieties of age, and with reviving joy thrilling his almost pulseless heart, he looks up to welcome the holy day, while a new life seems creeping through his

withered veins, and the pleasant memories of other days make him young again.

The thoughtless child leaps with an ecstasy of delight as the gently-moving air embraces his tender limbs, and laughs in his joy, but knows not why. The invalid, from his couch in the chamber, looks out through the upraised window into the silent depths of the sky, and ponders upon his celestial home, where he may spend an eternal Sabbath, freed from all sickness and suffering.

And now the silvery notes of a thousand church bells go echoing over the hill-tops and chiming through the valleys of all the pleasant land. As the clear and solemn vibrations fly on with heavenly melody to the threshold of each quiet home, they enter the open casement, and speak with a sweet and sacred eloquence, proclaiming the worship in an earthly temple of the eternal Architect of the heavens.

Presently, from lowly roof and lordly hall, from cottage home and princely mansion, come forth the gathering multitudes. Assembled in the house of prayer, reverently they bow while yielding up the sacrifice of thankful hearts, and supplicating the continuance of favors temporal and divine. Then how sweetly swells the beautiful song upon human tongues:

"Welcome, sweet day of rest,  
That saw the Lord arise,  
Welcome to this reviving breast,  
And these rejoicing eyes."

And what mortal so sensual and worldly as not to feel his own heart beating a fervent response; or what being so depraved as not to bless the Almighty, involuntarily, for this day of days—this blessed foretaste of a world to come.

—  
[*Orisons*, praises, prayers. *Cens'-er*, a vase or pan in which incense is burned. They were in very common use among the children of Israel, and are used at the present day. *Petaled censers* here signify the flowers.

—  
"With books, or work, or healthful play,  
Let your first years be pass'd,  
That you may give for every day  
Some good account at last."

## Science,

" Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### MANUFACTURE OF IRON.

BY T. ANTISELL, M.D.

**T**HERE are some kinds of manufacture which can not be carried on with advantage in every city, but which appear to have certain limits, within which only are they met with. Such are iron works, which can be best carried on where there is an abundance of ore, and plenty of fuel. These often exist together; hence foundries and furnaces swarm in such localities.

At Glasgow in Scotland, and in South Wales, coal and iron lie in beds or seams near each other. Pennsylvania and Eastern Tennessee furnish similar advantages. On approaching large iron works, the flame and smoke point out the locality vividly. The ever-enduring flame is the chief feature of these places.

An iron furnace is a most untiring laboratory, working night and day (Sunday included), never stopping for months, or sometimes for years. They are kept nearly full of fiercely-burning materials, and replenished at the top as fast as it is exhausted at the bottom. The top being generally open to the air, a body of bright flame is almost always shooting upward, lighting up the sky, and frequently is visible at several miles distance.

The furnaces are huge stone buildings, forty or fifty feet high. The inside is one large opening from top to bottom, about six feet square, but varying in width at different heights. It is lined with fire-bricks and cement capable of resisting the intense heat.

An embankment is carried up to the top of the furnace on one side, from which a road leads to the mine or locality where the ore is placed. This arrangement affords great facilities for filling the furnaces. In front of the furnaces are the places arranged for casting the melted iron into sand molds.

Let us suppose that any of the kinds of iron ore alluded to in our last communication have been raised from the mine, and deposited near the blast furnace. The next question is, how to extract the metal from the ore? The other ingredients being worthless, the object of the smelter is to get as much iron as possible from the ore. This is attained by first driving off those impurities which will escape in the gaseous form, and then to act on the more refractory ingredients.

*Roasting* the ore accomplishes the first of these two objects. This is generally done in the open air, on the ground. A layer of coal being first spread out, then a layer of iron-stone, and so on in alternate layers, until a heap several feet high is made. A fire is then kindled at one end, and works its way slowly to every part of the heap, roasting the ore as it proceeds. The water and sulphur are thus driven out of the stone, and it can be more readily acted on in the furnace.

Besides the fuel and the ore, a third substance is required to set free the metal, and enable it to pass into the fluid and molten state; hence it is called a *flux*. This substance is generally an earth, sometimes limestone, sometimes clay. These materials, in due proportion, are wheeled along to the mouth of the furnace, where, by machinery, the contents are immediately spilled into the opening. These fillings are made three or four times an hour, day and night, until the furnace gets out of repair, or there is a dullness in trade. As the mass within sinks down, fresh material is added at the top, so that a furnace of average size contains more than a hundred tons of burning material.

So enormous is this mass, and so great the heat required for the separation of the iron from the ore, that no ordinary draught

of air would suffice ; there must be a powerful current constantly blown into the furnace by machinery. This is called the blast. When the air is made to pass through iron pipes heated by the furnace itself, it becomes warmed up to a point so hot that lead would melt in it before it is blown in, then it is called the *hot blast*.

The use of the hot blast is a great improvement and economy in making iron. By it the iron is melted sooner, and with less coal. When melted, the metal is allowed to lie at the bottom of the furnace for some hours, after which it is removed, by withdrawing the plug from the furnace bottom, when a white hot stream of metal pours out into the sand, or a metal pot placed to receive it.

Few sights strike the spectator with more surprise and fear than looking at this molten mass of fire rolling out, and wending its way among the sand molds, fashioned according to the casting desired. Sometimes, instead of ornamental work, it is only desired to have crude or *pig* iron. Along the middle of the sand is formed a narrow, long channel, which is called the *sow*, from which branch off numerous lateral channels, or *pigs*, as they are termed by the workmen. So that by *pig* iron is understood the metal reduced from the ore, and cast in the way described.

It is not perfectly pure iron in this state, for such does not melt, but contains a quantity of charcoal, obtained from the fuel, which unites with the iron, and can not be burned off in the high furnace. This communicates the property of melting to the iron. Cast iron also contains a little sulphur and phosphorus, derived from the fuel or the flux. From these it must be freed before it can be converted into wrought iron or steel.

### A LAKE OF PITCH.

**T**HE Island of Trinidad is situated about seven miles from one of the mouths of the Orinoco river. The most remarkable natural feature of this island is the Pitch Lake, situated in the southwestern part of it. The lake is nearly a mile and a half in circumference,

and the pitch or bitumen at the sides is perfectly hard and cold ; but toward the middle it becomes gradually warmer and softer, till in some places it is seen boiling up in a liquid state.

A correspondent of the *Troy Whig*, at Port of Spain, Trinidad, gives the following description of this remarkable lake :

"Imagine a black surface, a dreary, desolate black, spread out to the length of half a mile, by an eighth in width, slightly varied by many fissures, some of them but a step across, some too wide to jump. A few of these fissures are filled with short shrubbery, but most of them are mere ponds of water, clear as the mountain spring.

"Then imagine the whole bordered by a thick growth of trees and the graceful bending bamboo, and this whole border thickly hanging with a profusion and variety of beautiful flowers ; and I know not the spot elsewhere where the eye can rest on such a profusion of flowers at a glance ; this may possibly convey some general idea of the peculiarity of a general view.

"For a closer inspection of the central part of the lake, I secured the services of a negro, to carry a plank for me to bridge the unjumpable fissures.

"I then found spots where the surface of the pitch would gradually sink beneath my feet, so that in a few moments I stood in a cavity ankle deep. Not wishing to *pitch* deeper, I changed my position. In other places it seemed to be boiling below, for the surface around me was bubbling and simmering like that of a pot over the fire, while the gas thus disengaged was very strong.

"Though the surface of the lake is generally too hard to receive a foot-print, being usually just hard enough to cut readily with an axe, there are places where the pitch oozes out in a nearly liquid form, so that one may dip it with a spoon.

"Near the lake I found a colored man engaged in boiling the pitch in several large boilers. A part of this he sells after boiling, in a pure state, and to the rest he adds a portion of lime, when it is shipped as mastic. He says that he has cut from the lake a great many hundreds of tons, but he never penetrates more than

ten or twelve inches below the surface, and the hole is always filled again within two days after the cutting. The supply is, doubtless, inexhaustible.

"But the pitch is not confined to the spot I have endeavored to describe. There are masses of it extending miles inland, and in several points it extends to the sea beach. At the last place it is cut out in large quantities to ship to this city, and to some of the islands, for use in building and flagging the streets. It is used by the steamers as fuel, being largely mixed with coal, and is recently coming into use in the manufacture of petroleum.

"But whenever these cuttings are made on the lake, inland, or on the beach, the quantity is almost immediately made good, and in some places gradually increases. The neighborhood is in motion, very slow to be sure, yet there is, as it were, a growing up of the surface in spots, so that the houses in La Brea are found, now and then, to have a side or an end raised a few inches above its opposite one."

### General Intelligence.

**THE NEW YORK STATE NORMAL SCHOOL** Is now near the middle of its twelfth term, which will complete the sixth year. The number of pupils in attendance is 206. The legislature, at its last session, passed a law providing for the education of ten Indian youths at this institution, and nine are now in attendance from the different reservations. The school is in a flourishing condition, and the demand for graduates, as teachers, is constantly increasing.

**RAILROAD ACROSS THE ISTHMUS OF SUEZ.**—The laying down of the great Anglo-Indian Railway is now proceeding in earnest. Mr. Stephenson, the engineer, has lately left Alexandria for Calcutta, with a staff of assistants, to commence this stupendous undertaking, which will exercise incalculable influence on the future destiny of the Indian world. Orders have been issued by the British government to render every possible assistance to facilitate the transit to Suez, where a large steamer is now building for the navigation of the Red Sea.

**THE NEW COMET.**—The comet recently discovered will continue to approach the earth until the middle of July, when it will be at its nearest position to us, or about thirty-eight millions of miles from the earth.

On the 11th of July, it will be seen a few degrees to the west of the bright star Arcturus, in the constellation Boötes. Moving rapidly to the south, it will pass near the star Spica Virginis on the 23d of July, and will soon after descend below the southern horizon.

As it is already fast increasing in brightness, it will probably be distinctly visible to the naked eye during the middle of July.

**DEATH OF THE EMPEROR OF CHINA.**—Taoukwang, the late emperor of the Celestial Empire, died last February, after a reign of thirty years. His son Yih-chu is his successor.

**THE AMERICAN MUSEUM.**—This vast establishment, owned by P. T. Barnum, is situated on Broadway, New York, near the City Hall Park, and open daily (Sundays excepted), for the exhibition of rare curiosities, both of nature and art, from all parts of the world; embracing the animal, vegetable, and mineral kingdoms. It has recently been enlarged and improved, at an expense of some \$50,000. It is now larger, and contains a greater number and variety of curiosities than any similar institution in America.

**THE FOREST AND THE NAVY.**—By a report of the commissioners of land revenues, it is estimated that a seventy-four gun ship contains about 2000 tons of timber, which, at the rate of a load and a half to a ton, would give 3000 loads, and would require 2000 trees of seventy-five years growth.

It has also been calculated that, as not more than forty oaks, containing each a load and a half of timber, can stand upon one acre, fifty acres are required to produce the oaks for every seventy-four gun ship.

**THE WELLAND CANAL.**—This canal has recently been enlarged, and vessels can now pass through it, from Lake Ontario to Lake Erie, in eight hours.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### THE WET VASE; OR, FACTS FOR CHILDREN.

BY MISS ELIZA A. CHASE.

**M**ARY.—Look, Charles, this vase is covered with little drops of water. I wonder what causes it.

*Charles.*—O, it is because the vase has been dipped in the water, and the drops stand on it, of course.

*Emma.*—That can not be, for I poured the water in myself when I arranged the flowers, and it was perfectly dry then. But how curious it is; the little drops are just like perspiration. This is what old Mrs. Hall means by saying the tumbler sweats, and she says it is a sign of rain.

*Mary.*—I remember hearing her say so, and when Julia asked her the reason of it, she said it was the warm weather. Mr. Hall said the air pressing on the water causes it to come through the pores of the glass.

*Emma.*—I do not think that is the reason, for, last Monday, when the wind blew so hard, and the rain beat against the windows, you know father was afraid they would be broken in, and he said he did not think glass would stand such a pressure, and yet the water did not come through.

*Charles.*—Let us go and ask mother the reason. She always tells us every thing we ask her.

*Mary.*—No; not always, for yesterday, you know, we asked her to find the Dead Sea for us, and she told us we must find it; then we should remember where it is.

*Charles.*—Yes, and she said we must learn to examine for ourselves, and not depend too much on others.

It is pleasant, to be sure, to find out things ourselves, but then it is so much trouble.

*Emma.*—Trouble! brother Charles, trouble! I hope you do not call that a trouble. Come, let us try some experiments. Here are some tumblers; now, we will fill one with water, and while we wait for the little drops we will look at our drawings.

*Charles.*—There, it has been ten minutes, and there is no water on the tumbler. Where did you get this water, Emma?

*Emma.*—From the pail by the door; but let us get some fresh from the pump, and try it again. Never give up, as mother says.

*Mary.*—Five minutes! Look, there is the water on the one filled last, but there is none on the first tumbler. Now, what is the reason of this?

*Emma.*—O, I have observed a fact, as our teacher would say. When we put very cold water into the tumbler, we see the moisture, but when the water is warm, like that from the pail which stood in the sun, the drops do not appear on the tumbler.

*Mary.*—You are an observing little body, Emma, and now can you tell why it is so?

*Emma.*—No, sister, I can not. But here comes mother; she will tell us, I am sure.

*Mother.*—My children, I have overheard your conversation, and am much pleased to hear you inquire into the reasons of things in this way. And now, as my little Emma has used her

observing powers to such good advantage, let her employ her reflecting faculties, and think what becomes of all the water which falls in rain.

*Charles*.—It dries up, mother; does it not?

*Emma*.—It evaporates, and forms clouds again, mother.

*Mary*.—Yes, and the clouds fall again in rain, and it evaporates, or turns to vapor again, and so on all the time.

*Mother*.—You have answered very well; but Charles will please remember, "it dries up" is not a very expressive phrase. This vapor is constantly rising in particles so minute that we can not perceive them, and it is this which settles on the tumbler when you pour cold water into it. The heat or temperature of the water being less than that of the air, the vapor is cooled, and made to assume the form of water. Similar to this is steam, which is condensed by coming in contact with a cold vessel.

I think you understand me; and now for the warm water in the tumbler. The temperature of this was nearly the same as that of the air, so the vapor was not condensed, of course.

*Emma*.—I understand you, mother, for steam would always be steam if it was kept heated, but when the heat is taken away it becomes water.

*Mother*.—So the warm water, keeping the vapor warm, prevents it from being condensed; while the cold water, by taking the heat from the vapor, causes it to form in drops on the vessel. So with the windows. When there is much moisture in the room, and the air on the outside is colder than that inside, you see the particles on the window in little drops; and in very cold weather they make the beautiful frostwork you so much admire.

*Mary*.—Now, mother, tell us why this is a sign of rain.

*Mother*.—When this occurs, it is an evidence that there is much vapor in the air, and this fact is sufficient of itself to show us that rain will soon follow. Learn from this to observe facts, as Emma says, and though you may not at the time understand them, keep them for future explanation.

## THE SCHOOL-BOY.

BY J. H. HANAFORD.

I LOVE to see the modest boy,  
With rosy cheeks and ringlets waving,  
As to his school he gladly goes,  
The summer's heat and tempest braving.

I love to see his beaming face  
And brow with kindness ever glowing,  
While mingling oft with playmates dear,  
And joyous smiles e'er glad bestowing.

I love to see him heed the bell,  
While yet 'tis gently, slowly ringing,  
And haste to join the happy throng,  
Whose voices blend in merry singing.

I love to see him bow his head,  
In humble posture meekly bending,  
And reverent clasp his little hands,  
While, upward borne, the prayer's ascending.

I love to see him quiet keep,  
And all his teacher's rules obeying,  
Nor joining e'er in truant freaks—  
In fields and woodlands stealthy straying.

I love to hear his lessons said,  
So perfectly are all recited,  
And hear his teacher cheer him on  
With every duty so delighted.

## ADVICE FOR EVERYBODY

If wisdom's ways you wisely seek,  
Five things observe with care;  
Of whom you speak, to whom you speak—  
And how, and when, and where.

Virtue is made for difficulties, and grows stronger and brighter for such trials.



### THE LITTLE SPEAKER.\*

You'd scarce expect a boy like me  
To get up here, where all can see,  
And make a speech as *well* as those  
Who wear the largest kind of clothes.  
I think it was in olden time,  
That some one said, in funny rhyme,  
"Tall aches from little toe-corns grow,  
Large screams from little children flow."  
And if that rhymers told the truth,  
Though I am now a *little* youth,  
Perhaps I'll make as great a *noise*,  
As some who are much larger boys.  
I will not speak of Greece and Rome,  
But tell you what I've learned at home,  
And what was taught me when at school,  
While sitting on a bench or stool;  
I've learned to talk, and read, and spell,  
And don't you think that's pretty well  
For such a *little* boy as I?  
But I must leave you—so good-bye.

\*Through the politeness of Messrs. Pratt, Woodford & Co. we present our young orators with the above cut, and the speech following it, from "The Student's Speaker," by J. S. Denman. Here are represented three positions for the speaker. The middle one is the attitude to be taken when commencing a declamation. In the accompanying article, the hand may be placed on the side, as represented by the right-hand boy, when the speaker commences with the fifth line—"I think it was," etc. We hope all little boys at school will practice declamation.

### ONLY ONE STEP AT A TIME.

**T**HE following excellent advice and encouragement is from the "Well-Spring." After reading it, we hope no one will suffer themselves to become discouraged at what they find to do:

"Horace is a round-faced, white-headed little boy, three years of age. One morning, as we came from our chamber, we overheard his mother say, 'Here, Horace, my dear, carry this book into your father's study, and lay it on the table.'

"The little fellow took the book, went to the foot of the stairs, and there he stopped. We wish our little readers could have seen him, as he stood gazing up that long flight, from the bottom to the top. Such a look of *discouragement* surely never before came over the countenance of the little boy. He seemed to say, by his appearance, 'How *can* I go up all these long steps?'

"The watchful eye of the mother immediately saw his trouble, and with a sweet, encouraging voice, she said, 'Oh, my son, it is *only one step at a time*.'

"And so the little boy found it. When he looked at the long, steep journey, and thought of it *all together*, it seemed a task too great for his tiny feet; but when he thought of it 'only one step at a time,' it seemed an easy matter.

"And how many a 'hill of difficulty' would disappear, if we would think of it as 'only one step at a time.' The long lesson, the hard sum in arithmetic, the errand a mile off, the big pile of wood to be carried into the house, the bed of strawberries to be weeded, all appear *easy* to accomplish, when we remember it is only one word, one figure, one step, one stick, one weed, at a time.

"Whenever, then, little reader, you feel discouraged at some task your



mother has assigned you, think of this mother's remark to her white-headed boy, '*only one step at a time.*' You must surely be a faint-hearted little fellow if *one step* frightens and discourages you. Well, if you can take *one step*, you can take the next, for that is only *one step*, and then another, and so on to the top. Try it, and not be chicken-hearted."



#### THE MATERNAL AFFECTION OF A CAT.

**W**E have seldom met with so singular an instance of the affections of a cat for its young as that related in the following story. We copy it from the "Green Mountain Gem;" where the writer of the article says he can vouch for its truthfulness:

"A few years ago, I purchased a pair of beautiful white rabbits. Soon after, a dog fell upon one of them, and killed it. The other was soon missing, and I concluded it was killed also.

"The next spring, on removing the hay from the barn, I found at the bottom of the mow my rabbit, together with an old cat, and a fine lot of kittens, all living together in perfect harmony. The rabbit had made a hole under the haymow, and thus furnished a house for the whole family.

"This led me to try an experiment, to see if what we call natural antip-

athy has any real existence. I took away one of the kittens, and put a small puppy in its place. On the return of the cat, she did not at first appear to like the change; but soon the puppy became the favorite of his stepmother, who brought it up with true maternal fondness. But, notwithstanding all her care and teaching, she could not make a cat of him. Like many little children, in spite of all her training, he would be a puppy still.

"My family of cats being rather more numerous than was convenient, I gave the kittens all away; and the puppy, by his *dog-day* manners, and boisterous barking, having alienated the affections of his stepmother, she abandoned him altogether. Thus deprived of her whole family, the old cat wandered around for several days, searching for her lost children.

"One day, after being out on one of her solitary walks, she came in with a small chicken in her mouth. This she safely deposited in her bed, lying down by it, and folding her paws around it, she and her new child were soon fast asleep.

"On waking up, the chicken commenced following her stepmother, and from that time the cat would answer the 'peep' of the chicken, and the chicken would run at the mewing of the cat.

"The old cat's sorrows seemed to be at an end, except in one particular. She would very often bring in squirrels and mice, and lay them down by her little fledgeling; but with all her anxious wishes, expressed too plainly to be misunderstood, she could not induce chickey to eat them.

"They thus lived, in perfect harmony, until the chicken was about half-grown up, when the puppy, as if from envy at seeing another supplant him in his stepmother's affections, killed his rival."

## Natural History.



### THE ORANG OUTANG.

BY HENRY WILSON.

**T**HE Orang Outang is an inhabitant of the peninsulas of Eastern Asia, and the islands of Sumatra, Borneo, and Java, and is also found in some parts of Africa. It is a solitary animal, living mostly in desert places.

From the resemblance of this animal to the human form, the natives of some of those countries which it inhabits, have given it the name of wild man of the woods. The name orang outang is from the Malay language, *orang*, man; *outang*, wild; hence, meaning wild man.

This animal belongs to the family of the monkey tribe, and is one of the most remarkable of this species. The body and limbs are covered with reddish and shaggy hair, longest on the back, and thinnest on the fore

parts. The face is flat, and the ears are like those of man.

In their native countries, these animals are said to attain the height of six feet, but the largest one ever brought to this country did not exceed three feet and a half in height. They have great strength, and when full grown will overpower the strongest man. They walk nearly erect, are swift, and usually go together in companies. If they happen to meet a man alone he is shown no mercy.

They sometimes attack and drive away elephants, by beating them with clubs and stones. They will also stone any person who offends them. But some ugly boys do even worse than this, they throw stones at those who do not offend them.

These animals live on fruit and

nuts. In a wild state they sleep in trees, making a sort of a shelter to shield them from the inclemency of the weather. They are of a grave appearance, and a melancholy disposition. Even when young they are not inclined to frolic, as the young of most other animals are.

In some parts of Africa the negroes imagine the Orang Outangs to be a foreign nation come to inhabit their country, and that they do not speak for fear of being compelled to work. When taken young they are capable of being tamed, and taught to perform many menial offices.

Francis Pyrard relates, in his voyages, that in the province of Sierra Leone there is a species so strong-limbed and so industrious that, when properly trained and fed, they work like servants. "They will pound substances in a mortar, go and bring water from the river in a small pitcher, which they usually carry on their heads. But when they return with the water, if the pitcher is not taken off they allow it to fall; and when they perceive it overturned and broken, they appear grieved, and weep."

Buffon mentions an Orang Outang that would "sit at a table, unfold his napkin, wipe his lips, and use a spoon or a fork to carry his victuals to his mouth. When invited to take tea, he brought a cup and a saucer, placed them on the table, put in sugar, poured out the tea, and allowed it to cool before he drank it.

"All these actions he performed without any other instigation than the signs or verbal orders of his master. He did no injury to any person; he even approached company with circumspection, and presented himself as if he wanted to be caressed. He was very fond of dainties, but would eat almost every thing, yet he preferred ripe-dried fruits."

This was a young one, only two

feet four inches high. He lived in Paris one summer, and died in London the following winter.

In 1835, an Orang Outang was brought to the city of New York, which at times performed actions that appeared to result from thoughts almost human. She was very fond of going into the kitchen, and observing the process of culinary operations.

In one instance, supposing she was unwatched, she went into the kitchen, and after looking about, opened the door of a closet in which stood a basin of milk. After looking at it, and on several shelves, as if searching for something, she carefully closed the door, and finding a tea-cup on the table, she returned to the closet, helped herself to a cup-full of milk, again closed the door, and replaced the cup on the table.

At another time, while she was sick, and had been given some medicine, the vial containing it was placed on the mantelpiece, while the attendants left the room, but kept an eye on her.

On finding herself alone, she arose from the corner where she had been sitting wrapped in a blanket, took a chair and carried it to the fireplace, stepped on it, took down the vial, uncorked it, poured the medicine out, recorked the vial, and placed it back again, then returned the chair, and took her former seat.

Buffon says, the principal external difference of the Orang Outang from man is the flatness of his nose, his short chin, the great distance between his nose and mouth, his ears, which are proportionately large, and his eyes, which are near together. The arms are longer, the fingers smaller, and the palms of the hands longer and narrower than those of man. The feet are more like the hands than like human feet.

The tongue and the organs of speech are like those of man, but it has a pe-

cular membrane or pouch connected with the windpipe, which renders it impossible for the monkey tribe ever to speak. Indeed, it is less capable of making an articulate sound than almost any other quadruped.

Though nature, by this thin partition of a membrane, has effectually declared that Orang Outangs are not men, yet the many remarkable facts recorded of their actions seem to carry the conviction that they must possess a high order of instinct.

By instinct we mean the mode of acting as nature directs, without reasoning. Reason requires instruction, it improves by experience; but instinct is nature at first; it is as perfect in the young animal as in the old. The first nest built by a bird is just as perfect as its last one; the spider spins her web as perfectly, and arranges it as ingeniously for catching flies at the first trial as after she has spun for months. Man reasons, and reflects, and improves by practice and maturity. These are endowments peculiar to him alone.

### THE PLEASANT SCHOOL.

ALT—Bruce's Address.

WHERE do children love to go,  
When the storms of winter blow;  
What is it attracts them so?—

'Tis the pleasant school.

Where do children love to be,  
When the summer birds we see  
Warbling praise on every tree?—

In the pleasant school.

When the beauteous morning breaks  
And each eye from slumber wakes,  
What such happy children makes

As the pleasant school?

Faithful may we keep the day,  
Never waste the time in play,  
Truthful all we do and say,  
In the pleasant school.

*Selected.*

### THE SCHOOLBOY'S SONG OF HOME.

BY MRS. M. L. BAILEY.

Oh, I'm coming again to the elm tree's shade,  
Where all the bright summer we children played,  
With green leaves above, and green grass below,  
Where the wild birds sing, and the wild flowers  
    blow,  
And the waters glide with a musical flow—  
Oh, the dearest spot on the earth to me  
Is the spreading shade of our old elm tree.

I am sitting now on a dusty form,  
In a city school-room, close and warm,  
And the glistening sun on the window pane  
Sends a keener pang to my throbbing brain,  
As I con my lesson again and again;  
But my heart is listening, whate'er I do,  
To the wind's soft murmur, the water's flow.

I seem to lie on the cool, green grass,  
Watching the clouds as they're sailing past,  
With half-closed eyes, as on many a day  
When I've rested there, tired out with play  
Dreaming the hours of noontide away;  
Dreaming, yet ready to spring with a shout,  
And join the reveling boyish rout.

Oh, I'm coming back; I am pining here  
For our mountain air, and our mountain cheer—  
For the warm true hearts, the fond caressing,  
My mother's kiss, and my father's blessing,  
And the brothers and sisters around me pressing;  
My heart is whispering, we soon shall be  
All gathered again 'neath our old elm tree.

*Friend of Youth.*

### A NOBLE BOY.

"A TOUCHING incident occurred recently at a steamboat sinking, in the Missouri River, near St. Louis. Among the persons who were swept overboard, were a woman, and a boy about twelve years of age. A man on the steamer seeing the boy buffetting the waves just beyond the boat, threw him a rope, and called to him to take hold of it. The little fellow replied, 'Never mind me, I can swim; save mamma.' They were both saved."

## LESSONS IN BOTANY.—No. 3.



## STAMENS AND PISTILS.

BY FLORA MILFORD.

**W**E now come to that part of the plant in botany considered the most important—the stamens and pistils.

Each stamen is divided into two parts: the slender, thread-like portion is the *filament*, from the Latin *filum*, a thread; the extremity is the *anther*, which contains a fine yellow dust, called *pollen*. Sometimes the filament is wanting; in this case the anther is said to be *sessile*.

In the cut of a lily, above, may be seen these organs. The six thread-like ones in the center of the flower, marked *a a*, are the stamens. The single one, marked *b*, and longer than the stamens, is the pistil. A stamen, with the pollen falling from its anther, is represented in an upright position, next to the lily, and marked *b a*; *b* shows the anther, and *a* the filament.

The pistil is composed of three parts, the *stigma*, *style*, and *germ*. On the left of the above cut is represented a pistil, showing these parts; *c* stigma, *b* style, *a* germ. The stigma is the extremity, and may be globular, parted, or undivided; the germ contains the future seed; the style is the intermediate part.

When the blossom is unfolded the anthers burst, and the pollen falling on the stigma fertilizes the germ. This

is easily proved by covering the pistils, commonly called silk of the corn, so that the pollen from the staminate flowers which grow above can not fall upon them; no seed will be produced. It is, also, the reason why different kinds of corn planted near each other will mix, as is often the case. The pollen from the anthers of the different kinds fall on the same stigma.

In the date, palm, and some other trees, the staminate and pistillate flowers grow on different trees, sometimes at a great distance from each other. The pollen is carried by the wind and insects to the pistillate flowers, but frequently the peasants gather branches of the staminate flowers, and sprinkle them over the others to insure the fertilization of the germ.

There is a fact in regard to the stamens and pistils truly worthy of notice. It teaches the beautiful economy of nature, and shows us that she is always fertile in means to accomplish a desired end. Whenever the pistil is shorter than the stamens, or equal in length, the flower is erect; if it be longer, the flower is nodding, as the honeysuckle, the lily, the violatricolor, and others. The effect of this arrangement is obvious. In the erect flower the pollen comes in direct

contact with the stigma; in the nodding, it falls upon it.

As moisture causes the anthers to explode, too much rain would be injurious, by causing the pollen to be scattered before the stigma is mature enough to receive it. Hence the farmer dreads wet weather when his crop is in blossom.

There are many facts connected with the present subject which are curious and interesting. Nature presents few more beautiful sights than the pollen of the honeysuckle, the bearded filament of the spider-wort, or the braided leaf of the arbor vitæ, (Thuja,) under a high microscopic power.

Indeed, the science of botany, from its beauty, order, and regularity, presents innumerable proofs of intelligence and infinite wisdom in Him who crowned the monarchs of the forest, and painted the delicate corolla of the blushing flower. Solomon, we are informed, "considered the herbs of the field, from the cedar of Lebanon to the hyssop that grows on the wall," and, no doubt, much of the wisdom that shone so conspicuous in his character was derived from his communings with these bright teachers.

We now consider the plant in regard to its manner of flowering; this is called inflorescence. The divisions of the flower stalk into smaller ones causes a great difference in the appearance of flowers, and a variety in the modes of inflorescence. That part of the stalk which proceeds from the stem and supports the flower, is called the *peduncle*; the divisions are termed *pedicels*.

The following are the most common kinds of inflorescence. An *umbel* consists of several pedicels, of nearly equal length, proceeding from a common peduncle, and spreading out in the form of an umbrella, as in the carrot, parsnep, and fennel.



UMBEL.

A *cyme* resembles an umbel, in its flower stalks rising from a common center, but differs from it in having the stalks of unequal length, as the snowball and elder.



CYME.



WHORL



SPIKE.

A *whorl* is an assemblage of flowers surrounding the stem, as in the balm, and most of the mint-like plants.

The *spike* consists of numerous flowers, arising from the sides of a common stem. The flowers are sessile, as in the mullen; the lower ones blossom first, and sometimes fade before the upper ones expand.



RACEME.



PANICLE

A *raceme* consists of flowers, each on its own pedicel, arranged on one side of a common peduncle, as the currant and locust.

A *panicle* is a loose, irregular bunch or cluster of flowers, as the oat.



FASCICLE.

*Fascicle*.—This consists of flowers on different stems arranged in a close bundle, nearly level at the top, as the sweet william.



HEAD.



CATKIN.

A *head* has sessile flowers in a globular form, as the clover.

*Ament*, or *catkin*, is a number of flowers composed of scales and stamens, or pistils, arranged on a thread-like receptacle, as the chestnut and willow. Most forest trees flower in this manner.



SPADIX.

*Spadix* is an assemblage of flowers growing on a common receptacle, and surrounded by a spathe or sheath. An example of this is seen in the wild turnip (*arum*).

**ANECDOTE OF WASHINGTON.**—It is related that when the British soldiers were about to march out and lay down arms at Yorktown, Washington said to the American army: "My boys, let there be no insults over a conquered foe! When they lay down their arms don't huzza! *posterity will huzza for you!*"

## THE CHILD'S EVENING PRAYER

BY MISS LUCY A. RANDALL.

The golden fires of summer's sunset  
Were burning in the skies,  
When an infant 'mid the blossoms knelt  
And closed her deep blue eyes;  
And there, where a thousand zephyrs  
Perfumed the summer air,  
She, pure as the modest lilies,  
Murmured her evening prayer.

And through the deepening twilight  
It soared gently on the air,  
Borne upon the snow-white pinions  
Of the angel of prayer;  
Through the crimson haloes of sunset  
It floated more bright than they,  
Till they hid in blushing hill-tops,  
Ashamed of their lesser ray.

Now the stars smiled brightly on it,  
As it passed their silver light;  
Moonbeams kindly shone to guide it,  
Through the pleasant summer night;  
The angels were singing praises,  
Replete with heavenly fires,  
But paused, and listened with rapture,  
As it chimed to their golden lyres.

To the throne of light and glory,  
Where white-winged angels stand,  
Where the Lord of Hosts is reigning  
In the happy spirit-land;  
To the green and sunny pastures  
Where living waters flow,  
That little prayer came soaring upward,  
From vales of earth below.

"From a little, blue-eyed cherub,  
Who dwells where cold winds blow  
From our little sister seraph,  
Who dwells on earth below;  
We will send the sweet death-angel  
To bring her spirit here,  
To treasure it pure forever,  
In our happy, heavenly sphere."

And bright with heavenly glories,  
The messenger of death  
Came unto the blue-eyed infant,  
And kissed away her breath;  
And ere the morn shone o'er her,  
With pure and holy light,  
'Mid the blossoms' sweet perfumes,  
The child lay dead that night.

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### MARY AND ANN.

ONE hot day in the month of June, Ma-ry said to her mam-ma, "It is so hot to-day that I wish you would let Ann and me go in the grove up on the hill."

"Well, Ma-ry, you may go if you will not go beyond the grove," said her mam-ma.

"No, I will not," said Ma-ry, glad to go where the air was cool.

Ma-ry soon told Ann where her mam-ma said they might go, then called the dog to go with them.

Ring was the name of the dog. He was fond of the lit-tle girls, and they were fond of him. He seemed pleased that he could go with them.

Ma-ry and Ann took a book with them to read. First Ma-ry read aloud, while Ann list-ened ; then Ann read for Ma-ry to list-en.

They took their draw-ing books and pen-cils with them, too. And when they were tired of read-ing they drew some pic-tures.

When they were on the top of the hill in the grove, they sat

on a log which lay in the shade. Ring lay down at their feet, and went to sleep.

There was a fine view from this grove. The girls could see the bay, and the ships sail-ing on it.

Some-times they could see as ma-n-y as ten ships at once.

They saw the birds fly-ing a-bout in the air, and heard their sweet songs in the grove.

Ma-ry and Ann sang some pret-ty songs, too. They loved to sing, and they were so hap-py in the grove that the hours seemed ver-y short to them.

They staid on the hill un-til the sun had near-ly set. It was then cool, and they went home, feel-ing quite hap-py.

Ring was hap-py, too, and jumped and barked when they were going home.

When they reached home they told their mam-ma what they had read a-bout, and what they had seen, and showed her the pic-tures they had made.

These were good girls, and they al-ways tried to do just what their mam-ma wished of them.



## AUNT ELIZA'S STORIES.—NO. III.

## THE SELFISH BOY.

**H**ENRY WILLIS had a large orange given him by his aunt, because he had done some little thing for her.

Now I am sorry to say that Henry, though a good boy in most things, was rather selfish; so when he reached home, instead of giving his little sister Clara a piece, as he ought to have done, he sat down and began to eat it himself.

Clara looked at the orange, for it seemed very tempting, and she thought, "Henry will surely give me a piece." But selfish Henry devoured the orange very greedily, seeming not to notice his sweet little sister.

At length Clara spoke very timidly, "Brother Henry, will you give me a piece of your orange, a very little piece; it looks so good?" "No, I shan't," said he, "it is all I have got, and I want it myself."

Clara's blue eyes filled with tears, but young as she was she was more grieved at the unkind words of her brother than at the loss of the orange.

As Henry looked at the tearful face of his sister he felt a little ashamed of his conduct, and say-

ing in no very pleasant way, "How cross you are, Clara. I would not cry for an orange," left the room, and went to play with his ball.

It happened that his mother, who was in the next room, had heard all that was said by the two children, and she thought she would teach her selfish boy a lesson.

"Clara—where is my little sister Clara?" she called; "I want her to go out walking with me."

Clara heard her, and wiping her tears away, she ran to meet her kind mother.

They walked out in the fields, and into the beautiful garden of a friend, who gave them many of her prettiest flowers; and so delighted was Clara that she quite forgot her grief.

She was so pleasant and behaved so well, that the lady asked her mother to let her come again the next day.

Clara was much pleased when her mother gave her consent, and she thought that Henry, too, would like to come.

While they were going home, her mother asked her what she should do with her flowers. "I will put them in the vases," said she, "and set one in your room, one in mine, and one in brother Henry's."

"I am glad you remember your brother," replied her mother, "and I hope you will always be with him, for I do not want my little Clara to be a selfish child. And besides, you will not be so happy to be selfish as you will be to share with others, even though they may be selfish toward you."

Clara thought of the orange, and she did not say a word. When she went again to see the lady, she took her to a pretty arbor where hung rich clusters of the sweetest grapes, and gathering some of the finest bunches, she gave them to Clara, and told her to eat them.

Clara looked up very sweetly, and said, "If you please, I would like to carry them home, that my mother and brother may have some, too."

"Eat them, my dear," said the lady, "and I will give you more to take home." The lady was much pleased that Clara was so generous, and when it was time for her to go home, she brought a large basket of grapes, and sent her daughter Caroline to carry it for her.

When Clara reached home she called her mother and brother, and taking some of the largest bunches, gave them to Henry.

The selfish boy felt quite

ashamed when he thought how unkind he had been, and how different his sister behaved to him; but he thanked her, and said no more.

I am sure his grapes did not taste as well as they would have done had he been more generous to his sister; for selfish and unkind children are not happy, and though they make others suffer, they suffer most themselves.

The next day, Clara's mother gave her an orange, and she went to her brother, and said, "Here, brother Henry, take my orange, for I had grapes at Mrs. Hart's and you had not; so take the orange, dear brother."

Henry could hold out no longer. Bursting into tears, he threw his arms around his sister's neck, and said, "Forgive me, dear Clara, forgive me, and I will never be so selfish and unkind again."

Henry kept his promise, for his sister's kindness had overcome the evil of his nature, and he became a generous boy.

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#### THE EVENING HYMN THAT ALICE SINGS.

My work is done, I've quit my play,  
I'm older, now, another day,  
And I will sing before I rest,  
This little hymn I love the best:

I will not fear in darkness deep,  
For God is with us in our sleep,  
And He will keep me, day and night,  
Safe in His love, if I do right.

When I'm alone still near He'll be  
 For in my heart He teaches me ;  
 And I will try to do His will,  
 And every day grow better still.



### THE GOLD FISH.

**O**NE day, when Jane had been out to look at her gold fishes, she came running back crying.

"What are you crying for, Jane?" said her mamma, kindly.

"Why, mamma, I have found one of my gold fishes lying on the floor, quite dead; and I am sure some one must have taken it out of the basin, for it could not get out itself."

"Who do you think would be so cruel as to take it out?"

"One of the children, I think, mamma. Perhaps it was Tom, for he is always in mischief."

"Well, Jane, Tom is not cruel; though I own he does indulge rather too much in mischief; but I will call the children, and inquire of them."

"Children, have any of you been looking at sister Jane's fishes this morning?"

"I have not, mamma."

"Nor I."

"Nor I, mamma," exclaimed Thomas, Lucy, and Maria.

"Then, mamma, it must have been little Frederick," said Jane.

"No, Jane, you can not think it was Frederick, for you know he has to stand on tip-toe even to look into the basin; but here he comes."

"Frederick, have you been looking at sister Jane's fishes?"

"Yes, mamma; and I took one out, and it was so glad it jumped out of my hand."

"And did you not catch it again, Frederick?"

"No, mamma, it would not let me, it was so pleased to be jumping on the floor."

"It went on playing and jumping for a minute or two, then it laid still, and went to sleep."

"Ah, Frederick, the poor little fish is dead!"

"Who killed it, mamma?"

"It died because you took it out of the water; fishes can not live out of the water."

"If I were to put you in the water, and leave you there, you would die; and so the poor little gold fish died because it was taken out of the water."

"Then, mamma, why did it jump, and seem so glad?"

"It was in pain, my dear; it was dying."

"Oh, mamma, I am very sorry."

"So am I, and I hope this event

may never be forgotten. Now, will you tell sister Jane you are sorry, and ask her to forgive you?"

"Yes, mamma, I will."

Jane forgave Frederick, and he never took any more fish out of the basin to see them hop and jump.

He was a very small boy, and only three years old when he did this act. He did not know but a fish could live out of the water.



## UNCLE ROLLO'S ADVICE.

### ABOUT THE HAND.

**S**OME, children, do you remember what our last advice was about?

*Children.*—O yes; it was about the mouth. You told us we must take care of it, and teach it good manners.

I am glad you remember so well, for it was two months ago when I told you that.

Now I am going to tell you about the hand, and I hope you will remember all I say about it.

Every limb of your body was made for some good purpose. The eyes are made to see with; the ear is made to hear with; the nose to smell with; and you remember that you told me the mouth was made to eat and speak with.

The feet are made to run and walk with; and the hands are made to work with, to write with, and to do many other things.

But there are some things that hands are not made for.

Your hands were not made to pick cherries, or plums, or peaches, or apples, or any thing else that does not belong to you, without liberty.

If you should see doors and windows open, or desks and safes, your hands were not made to take any thing which you thus see that does not belong to you.

I have seen children quarrel and fight, and I have seen them throw stones and sticks at each other.

Now, do you think their hands were made for such things? Are children's hands made to strike their brothers, or sisters, or play-mates?

God gave you hands. Did He give you hands to snatch things from each other?

Did He give you hands that you might throw stones at geese, or hens, or dogs, or cows, or other animals? No.

Now, children, I hope you will take care of your hands, and never let them do any thing wrong. If you do this, Uncle Rollo will always be glad to see you.

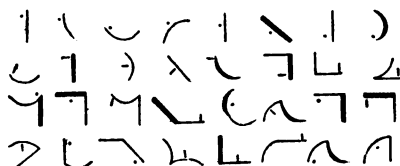
## Phonography.—Lesson 3.

In the former lessons we have explained the heavy dots and dashes, or long vowels; we now come to the short vowels, or light dots and dashes. The light dot in the *first position* represents the sound of *i* in *ill*, thus  $\dot{\mid}$  *it*; in

the *second position*, the sound of *e* in *ell*; in the *third position*, the sound of *a* in *am*, thus  $\dot{\mid}$

at. The light dash in the *first position* represents the sound of *o* in *odd*; in the *second position*, the sound of *u* in *up*; in the *third position*, the sound of *oo* in *wood*.

### WORDS CONTAINING SHORT VOWELS.



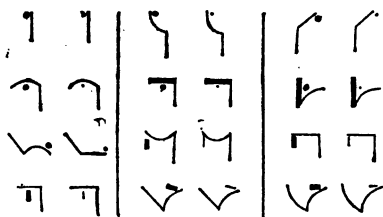
1st line—*it, if, in, ell, et, ebb, at, as.*

2d “ *on, odd, us, up, of, could, took, shook.*

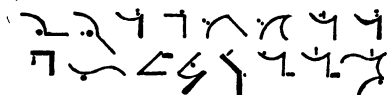
3d “ *and, get, not, book, then, love, kid, got.*

4th “ *much, tin, cap, some, duck, look, live, let.*

### WORDS CONTAINING LONG AND SHORT VOWELS.



THE ASPIRATE *h* is represented by a small dot, before another dot or dash. It never occurs except immediately before a vowel, thus  $\dot{\mid}$ , *eat, heat.*



*Words contained in the above exercise.*

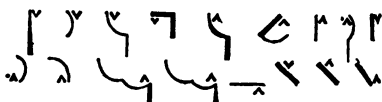
1st line—*ark, harp, hand, act, help, health, hunt, hanged.*

2d line—*God, name, chalk, change, body, into, unto, monthly.*

### THE PROPER DIPHTHONGS.

The proper diphthongs, as heard in the words *ice, boy, cow*, are represented by small angular figures, as seen in the following exercise. *i* is placed in the first position, with the angle or point downward; *o* is placed in the first position, with the angle upward; *ow* in the third position, with the angle upward. In placing these characters to the consonant signs, care should be taken not to incline them; they should always retain the position described above.

### EXERCISE.



*Words contained in the above exercise*

1st line—*tide, ice, fight, guide, void, join, toy, hoist, die.*

2d line—*house, hour or our, found, fount, cow, buy or by, boy, bough or bow.*

Some general directions have already been given for placing the vowel signs to the consonants, but some further explanation is required when two or more consonants are joined. Hence the following rules:

### RULE FOR FIRST PLACE SIGNS.

When the vowel, or diphthong, comes within the angle between two consonants, the sign for it should be written against the first consonant sign.

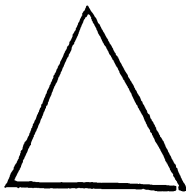
### RULE FOR THIRD PLACE SIGNS.

The third place vowel, or diphthong, should be written against the second consonant sign, if it comes in the angle, to place it to the first consonant.

In words of more than one syllable it is better to write the vowel sign to the consonant to which it seems to belong in dividing the word into syllables, if it does not violate either of the above rules.

It is very important that the lessons already given be thoroughly studied, till the learner can not only read but write all the characters introduced in the first three lessons, with facility. Without thoroughness at the outset, it will be difficult to make rapid progress in future lessons.

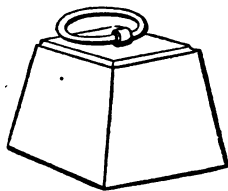
## Drawing Department.



*Triangle.*



*Hammer.*



*Weight.*



*Blue Flag.*

Above we have given some cuts which consist almost entirely of simple straight lines; these are intended for beginners to draw. The one representing the blue flag will be a good specimen for older pupils, and may be colored by those who can paint. Many of the engravings introduced as illustrations, in each number of *The Student*, will furnish good examples for drawing, and we hope our young friends will not fail to make the trial of producing something as beautiful as the original. When you have made the attempt, send us some of your specimens, and let us see how well you succeed. Now, don't forget it.

Here are some drawings from our young friends; but where are those leaf printings? Come, boys and girls, make haste, and set up your printing presses, and send along your exchanges.

Names of pupils who sent us drawings, from Miss F. R. Harris' school, North Bergen, N. J.: Mary E. Morton, aged 10; Sophia Green, 6; Amelia Morton, 7; Sarah C. Wanamaker, 7; John Green, 13; Josiah Hornblower, 13; Edward Oliver, 11; Edmund Alvord, 11; Horace Montague, 9; Yeardley Cooper, 9. These pupils are making good improvements in drawing.

From pupils attending Mr. Andrew L. Foote's school, Far Rockaway, L. I.: Sarah Hewlett, aged 13; J. Augustus Hewlett, 15; William Henry Hewlett, 13; Joseph Andrews, 12.

From a few of the pupils who attend the Public

School at Flushing, L. I., Mr. Harrison, teacher, we have recently received some very excellent drawings. We shall be happy to receive more from these pupils, and send them others in return.

What progress are the pupils making in drawing in those schools who sent us so many specimens during last summer, but from whom we have not received any drawings as yet, this summer? Will you please to send along a few more of your exchanges.

**THE VALUE OF DRAWING.**—By many teachers the value of drawing is overlooked, and too often it is considered a task entirely too difficult for their pupils. But when viewed in its true light, it is found to be as easy of acquiring as writing, and also of much practical value. Suppose your school is composed mostly of small children; let them all be supplied with slates and pencils, then draw on the blackboard with chalk the outlines of a few simple figures, at first those composed of only straight lines. Request each pupil to copy these several times, till they can make them nearly or quite as well as the original.

At other times place before them a few drawing cards, allowing them to copy these on their slates. Sometimes make figures and printed letters for them to imitate. All of these may be introduced for employment and amusement during those hours that small children are engaged in playing or are required to sit inactive with folded hands.

## Editor's Table.

**TO OUR READERS.**—You have now received the third number of our Family Miscellany, and, doubtless, given it a careful examination, but with what satisfaction, or how it has answered your expectations is best known to yourselves. From the prospectus you perceived that we marked out for it a broad and comprehensive field, yet we mean to occupy it ALL. But you can not expect that we should serve up so great a variety each month; such a course would, by the sameness of that variety, soon weary and become uninteresting.

It is our aim to present each theme in its proper season. During that portion of the year when nature is decked in her flowery robes, and scatters her sweetest fragrance over the earth, Lessons in Botany are appropriate. When these lovely flowers shall have faded, Physiology may usurp the place now occupied by that subject. Under the head of Natural History our thoughts will principally be turned toward the feathered songsters, while they are warbling forth their sweetest notes from forest dell and shady grove.

Natural Philosophy, Chemistry, Geology, Mineralogy, and Astronomy must each in turn give place to the other. Thus from time to time useful topics will supplant others equally useful, enabling us to lay before you ALL and even more than we have promised. We aim not to merely please the fancy and beguile the passing hour—a nobler and higher object invites us onward—that of introducing to you solid, practical instruction, in an entertaining manner, breathing the while a hopeful and animating spirit.

**NEW YORK STATE TEACHERS' ASSOCIATION.**—The next annual meeting of this association will be held in the City of New York on Wednesday and Thursday, the 7th and 8th days of August next. The following gentlemen are expected to deliver lectures before the association during that session, viz.: Rev. Professor J. Proudfit, of Rutgers College, N. J.; S. B. Woolworth, of Cortland; D. H. Crattenden, of New York; G. L. Farnham, of Jefferson; S. S. Randall, of Albany; O. B. Pierce, of Oneida; Prof. Taylor Lewis, of Union College, Schenectady; Thomas Valentine, of Albany; D. P. Lee, of Buffalo; F. W. Phelps, of the State Normal School, Albany. An essay may also be expected from Miss Susan A. Blandell, a distinguished teacher of Chatauque county, New York.

"High expectations are entertained that the

annual meeting of 1850 will exceed, in importance and interest, any which have preceded it. The committee of arrangements of this city, of which S. S. St. John is chairman, will attend to providing the best accommodations to delegates, at reduced prices."

It is hoped that teachers from all parts of the state will be present at this meeting, for there is a call for an increase of interest in the teachers' profession, and a demand for deliberate council and efficient, energetic action.

**FREE SCHOOL STATE CONVENTION.**—This meeting, which was called in consequence of an act passed by our last Legislature to re-submit the Free School Law to the people at the next state election, on the question of "repeal" or "no repeal," will meet at Syracuse, N. Y., on the 10th inst. At this convention the subject of Free Schools will be discussed, and measures adopted to secure a thorough organization throughout each county and town in the State, with a view to a discussion of the Free School Question in all its aspects.

We approve of this movement, and hope ample arrangements will be made to bring the subject fairly and candidly before every voter in the state, and we do believe when this is done that the principles of Free Schools will be triumphant.

**THE NATIONAL CONVENTION OF THE FRIENDS OF EDUCATION** will hold its first annual meeting at Philadelphia, Pa., on Wednesday, the 23rd day of August, 1850.

**POETRY FOR SCHOOLS.**—This is a work by Eliza Robbins, just published, in a revised form, by C. S. Francis & Co., 252 Broadway, New York. It commences with a description of poetry, its nature and kinds, giving illustrations of figures of speech, which are followed by the history of English poetry, with copious extracts from the best poets. To this are added several specimens from our best American poets. One interesting feature of this work is the biographical sketches of the poets from whom extracts are made. This serves to attach the memory of the man to his works.

**THE HARMONIA.**—This is the title of a new collection of songs for the use of schools and social circles, by Solomon Cone; published by E. H. Pease & Co., Albany, N. Y. One peculiar feature which we observe in this work is the elementary instructions. The author has fearlessly adopted new definitions wherever he thinks old ones are faulty, and introduced many original and practical exercises. Some of these combine valuable exercises in elocution with the rudiments of music.

**THE NORMAL SERIES** is the title of a new series of reading books for schools, by J. R. Webb, published by Messrs. Huntington & Savage, 216 Pearl Street, New York. They have been prepared with much care, and present many interesting features. Among other things music is interspersed. The song in our present number is from Webb's Third Reader.

**BE KIND TO THE LOVED ONES AT HOME.**

**Words by Miss COURTNEY.**

**Music by J. R. WEBB.**

**Soprano.** *Not too fast—Tender and with expression.*

1. Be kind to thy Father, for when thou wast young, Who loved thee so fondly as he ?  
2. Be kind to thy Mother, for lo! on her brow May trac-es of sorrow be seen ;

*Alto.*

3. Be kind to thy Brother—his heart will have dearth, If the smile of thy joy be withdrawn ;

He caught the first accents that fell from thy tongue, And joined in thy innocent glee.  
O! well mayst thou cherish and comfort her now, For loving and kind hath she been.

The flowers of feeling will fade at their birth, If the dew of affection be gone.

*mf*

Be kind to thy Father, For now he is old, His locks in-ter-mingled with gray;  
Remember thy Mother— for thee she will pray, As long as God giveth her breath;

Be kind to your Brother—wherev - er you are; The love of a Brother shall be

His footsteps are feeble, once fearless and bold : Thy Father is passing a - way.  
With accents of kindness, then, cheer her lone way, E'en to the dark valley of death.

**4 Be kind to thy Sister—not many may know**  
**The depth of true sisterly love :**  
**The wealth of the ocean lies fathomed below**  
**The surface that sparkles above.**  
**Thy kindness shall bring to thee many sweet hours**  
**And blessings thy pathway to crown :**  
**And affection shall weave thee a garland of flowers,**  
**More precious than wealth or renown.**



## PRACTICAL HINTS TO TEACHERS.

## SPELLING.

Few branches pursued in schools are less effectually and practically taught than spelling. In this branch of education there is an important demand for a reform. The methods by which it is usually taught do not produce good practical spellers. The principal object in learning to spell should be to enable us to write words correctly; hence those methods which will most speedily and effectually attain this object are certainly the best. In treating this subject we shall first mention some of the defects in teaching spelling, hoping thereby to render the hints that may be offered more clearly understood.

Spelling words without pronouncing the syllables should not be allowed. It leads to habits of indistinct articulation. It does not teach the proper division of words into syllables; hence pupils thus taught would frequently violate the following rule for the division of words when writing:

"If there be not space enough for the whole written or printed word in one line, and a part of it is to be inserted in the next, the word should always be divided between syllables, and not elsewhere." For instance, in writing the word *singing*, *sin* should not be placed on one line and *ging* on the next; this would cause the reader to pronounce it as if written *singe-ing*, which would be far from meaning the utterance of musical sounds.

Another fault consists in a departure from the correct pronunciation of words, by the teacher, when enunciating them for the pupils to spell. This is often done without a thought of its being a defect; indeed, some even think that the true way to pronounce words for a spelling class is to enunciate them so distinctly that every syllable is made emphatic. This supersedes all necessity of studying the lesson. In this way, too, pupils learn words with sounds so unlike those given them in reading, that they do not recognize them when correctly spoken. The true way is to pronounce the words just as a correct reader would speak them in reading, except in the inflection.

The word *often* is frequently put out by teachers, *often*, sounding the silent *t*. By this means the word pronounced is readily spelled; but what is gained by it, since that word is not heard in reading or conversation? Hence, when *often*, the true pronunciation, is spoken, the pupils taught as above would seldom spell it correctly.

There is another class of words of which *fidelity* will serve to illustrate the erroneous pronunciation. In this word the vowel *i* in the first syllable is obscure, and the word spoken as if that syllable was spelled *phy*, and had the sound of *phy* in philosophy. But the teacher pronounces it *fi-del-ity*, giving the vowel *i* in the first and third syllables a long sound. Here the pupil is not only learning to spell words which he will not hear in conversation or from good readers, but is also acquiring a false pronunciation. We will give but one more illustration of this kind. Words ending in *ed*, as *vowed*, *sowed*, *plowed*, *played*, should be spoken *vow'd*, *sow'd*, *plow'd*, *play'd*; but some teachers put them out to a class thus: *vow-ed*, *sow-ed*, *plow-ed*, etc. As well might he say when pronouncing the table of abbreviations, A. M., be-

fore noon; M. A., master of arts, thus informing the pupil what to echo back.

Another common fault in the mode of teaching spelling is this. If a word is not correctly spelled by one pupil, the teacher puts it out to the next, and the next, and so on, until it is spelled aright by some one; then the next word is taken without requiring the pupils who have missed the word to repeat the corrected spelling. Sometimes a still worse method is practiced; when a word is missed, the teacher corrects it and passes on. From this practice the pupil derives about as much intellectual good as he would of physical strength from having some one to eat for him.

Having mentioned some of the defects in teaching spelling, we will now proceed to enumerate some modes which will be likely to attain the object sought in spelling.

The best way which we have ever known for spelling orally, is for the teacher to pronounce a word to a class, and wait just long enough for each scholar to spell it mentally, and then point to of some a particular scholar to spell it orally. Then another word is pronounced, and some other pupil designated to spell it, and so continued. This fixes the attention of every scholar, for no one knows who will be called upon to spell any word. If a listless pupil should be observed, he should be frequently named, till he is taught to give attention.

If such a class should consist of twenty pupils, twenty minds are at work the moment the word is uttered by the teacher. Hence it is a vast gain over the old method of spelling by rotation, by which, as soon as one pupil has spelled his word, knowing that nineteen others have to spell before his turn will come again, away goes his mind, playing ball, flying his kite, or skating, until, "in the course of human events," a word comes around once more to disturb his imaginary enjoyment, and bring home the truant, but only to escape again as soon as his word is spelled. Rotation spelling ought never to be practiced, unless it be by small classes composed of the youngest children.

When teaching spelling by the method recommended above, the pupils should be requested to raise their right hands whenever an error occurs. Then one of the pupils with uplifted hand may be named to spell the word, and the scholar who missed be required to spell it correctly. This adds much animation and interest to the exercise of spelling. Another excellent method of teaching this branch, especially to the older pupils, is by the use of slates. The teacher pronounces the words slowly, giving time for all to write them simultaneously. When the lesson has thus been gone through with, the teacher takes a slate from the pupil on the right of the class handing it to one on the left, meanwhile each pupil hands his slate to the one on his right. Each scholar now examines his neighbor's work; and while the teacher reads the words, as errors are seen hands are raised and the corrections made, the pupil who made the error being required to spell the word orally, and also write it correctly on the blackboard. By this method a habit of writing words correctly is formed, and this is the most important object to be gained from spelling.

# THE STUDENT.

## HUMAN LIFE ILLUSTRATED.

BY HORACE GREELEY.

**H**UMAN Life! how inspiring, how boundless the theme! Sadly, wildly has the poet sung of it; calmly, lucidly has the historian traced its meanderings; earnestly, gravely have the priest and sage exposed and re-proved its errors from the birth of the race.

The nurse's story depicts it; the scholar's research illustrates; the statesman's harangue illumines and exalts. From the cradle, over which the young mother bends with novel sensation of wondering delight, to the bier, around which all are melted in the brotherhood of a common sorrow, this life of ours is a marvel and a poem.

Are we dwellers in the country? From that low-roofed cottage a youth is going forth, with lofty heart, to do and dare on the great battle-field of manly adventure. He has given ear to his father's counsel, he has knelt to receive a mother's blessing; he has smiled at the fears and regrets expressed by younger and tenderer hearts around him; for a sanguine spirit urges him on, and he sees already fortune and honors awaiting him in the distant city to which his eager footsteps tend.

Not till the hour of parting has come and passed, does he feel how heavy the chain *he* drags, who goes forth for years from all he loves on earth; not till the stately, branching elms which overhang the dear spot have waved their last mute adieu to his backward glances; not till the stream, which was the companion of his boyish pastimes, has bent away from his frigid course, and buried itself among the wooded hills, does he feel that he has shaken off the companionship and supports of his youth, and is utterly alone.

Are we dwellers by the seaside? Here the sailor is bending the white canvas for a voyage—it may be around the world.

Before he shall again drop anchor in the haven he deems his home, he may, from his vessel's deck, gaze on the peaks of the Andes, the sulphurous flames of Kirauea, or may thread with his bark the perilous windings of the forest-mantled Oregon; may survey the porcelain towers of Canton, or the naked site of Troy, whose very ruins have vanished, leaving no monument of their existence, save in Homer's undying song.

Here, too, the emigrant is bidding adieu to the ungenial land of his birth and his love, and, with his household gods around him, is seeking on a distant shore a soil on which his hopes may expand and flourish.

There is sadness, there is anguish in the parting hour. The tree most carefully transplanted must leave too many fibers in its native soil; and the life-long dweller in some secluded valley, who first finds himself confronted with a thousand leagues of raging brine, across which lies the way to his unknown future home, may well recoil and shudder at the prospect.

But the hoarse order to embark is given and obeyed; the last adieux are looked from streaming eyes; the vessel swings slowly from her moorings; the young look out in wonder on the bleak waste of stormy waters, and turn inquiringly to those who are perchance as young in this hour's sensations as they. And so wears on the passage; and at length, amid new scenes, new toils, anxieties, and troubles, the pilgrim finds that care rests its eternal burden on man wherever he is found; that earth has no more an Eden.

What reck's it? The same blue heaven bends lovingly over all the children of men. New scenes, new hopes, new prospects speedily dim the memory of keenest disappointments, of deepest regrets; and

the heart, transplanted, sends out its tendrils in every direction, and learns to blossom and grow again. And thus do all of us, each in his appointed sphere and season, open new chapters in the great volume of Human Life. \* \* \* \* \*

There is much of human attainment dependent on circumstances; let us not forget how much, also, I will not say how vastly more, depends on essential man. There is a deplorably immense multitude who live but to eat bounteously and daintily, with whom the sum of life is practically to compass the largest amount of rich viands, and gaudy trappings, with the smallest outlay of effort or perseverance to procure them. This mass will be at Rome Romans, at Moscow Russians, and nothing more.

Alas for us! we are a dwarfed, distorted race! We are but the fragments and pigmies of what we might and should be! Here and there we see a judge, a general, a ruler, perchance a poet, an orator, a pastor, how seldom a whole man! Our excellence, what there is of it, runs in veins, in seams, in zig-zags; seldom is it found diffused and equable.

Could a mental daguerreotype be held up before us, one on which the fullnesses and deficiencies of the character should vividly appear, what deformities and defects should we not be surprised to discern! far beyond any ability of paint and patches, of whalebone and padding, to disguise or conceal. What indiscreet philanthropists! what godless patriots! what uncharitable devotees! Must we abandon in despair the hope of a true manhood? Must human virtue be ever a tiny rivulet, meandering through a boundless bay of prejudices, selfishness, and passion? Let us hope otherwise.

But life has not rugged and repulsive aspects only; even perverted and degraded as it is, it smiles upon us through kindly and sympathizing eyes. Viewed in a genial spirit, it presents themes of elevating, chastening contemplation.

Not in the rough and stormy collisions of the market-place, the forum, the senate, the battle-field are its true nobility, its essential beauty manifested; but in the uncalculating hospitality of some rude squat-

ter on a Texan prairie; in the clustering around some lowly New England fireside, of long-scattered members of a family which passed its childhood thereby, freely disbursing the hoarded coin they ill can spare, that they may gather from the distant Ohio, Iowa, Mississippi once more beneath the dear old rafters, so blackened with smoke and age, to receive for the last time the tottering father's grave, affectionate counsel, the pious mother's fervent, tearful blessing. \* \* \* \* \*

The vital principle, which must be the basis of a true life, is forgetfulness of self in aspiration for general good. The act, of which selfish gratification or advantage is the impulse, can not be holy nor heroic; it can scarcely be other than ignoble and wrong.

A life of selfish aims and exertions, how sordid and despicable! how groveling its morality! how lean its virtue! how icy and stolid its innocence! And yet this is the acme of much of the teaching and more of the example of the world.

That evil inevitably leads to degradation and misery, is a truth which should receive every practicable demonstration, which should be early and deeply imprinted on every heart. But the avoidance of evil is a lesson for infancy in moral culture; goodness for the sake of goodness, for the love of goodness, that is the highest inculcation. Not to do right for the sake of happiness, in the usual low sense of the term, but for the sake of right, is the true precept. The whole life, even of the humblest, should be a spontaneous aspiration. Then goodness is no more a holiday cloak, a Sunday feat, but a breath, an atmosphere.

Happy he who shall be enabled to show forth in his own what human life should be, unpolluted by evil passions, uncorroded by sordid cares, unchafed by the disappointment of selfish aspirations, ever shielded from the access of temptation and error, by finding delight in duty, and a tranquil joy in the widest diffusion of blessings.

Happy beyond power of evil destiny shall he be whose life flows on in one calm, full current of active goodness, of unceasing benevolence to man, of unbounded re-

liance on God. Looking back in the evening of his days through the dissolving mists of the past, he shall discern in every trial, discipline; in every sorrow, the salutary chastening of a Divine beneficence.

And when the bowed frame and feeble limbs shall admonish him of failing power to execute the dictates of a still loving heart, he shall need no further witness of the benignity of that dispensation which sin recoils from as death, but, pillowed on that blessed Book, whose promises have lighted the dim pathway to millions, shall sleep to be awakened in heaven.

[The preceding article is an extract from a Lecture on Human Life. The whole of the lecture, with many others, and also miscellaneous articles, may be found in a work by Horace Greeley, entitled "Hints toward Reforms," recently published by Messrs. Harper & Brothers.

*Ki-rau'ea*, a volcano situated in Owhyhee, one of the Sandwich Islands. It is said to have the largest crater, and to be the most terrific volcano on the globe. The crater is about a mile in diameter, and apparently some eight hundred feet deep. The bottom is covered with a lake of lava, and in many parts it is one vast flood of liquid fire, in a constant state of ebullition. Upward of fifty small craters or openings rise above the surface of this burning lake. *Ore-gon*, the large river in the Oregon territory, now called Columbia River. *Can-ton'*, the principal port in China for foreign trade.]

## SCIENCE.

BY JOSEPH B. HOAG.

THE world in primal darkness lay,  
Enwapt in gloomiest night,  
Without a single glimmering ray  
To lend its friendly light.

Enveloped was the human mind,  
In darkness drear and dread,  
Man's noble powers were all confined—  
By no kind beacon led.

At length the star of science rose  
This darkness to dispel,  
Creation's mysteries to disclose,  
And nature's wonders tell.

Upon her balmy wings she bore  
The thoughts of man away,  
And bade him boundless worlds explore—  
No more in darkness stay.

She bade him walk the ethereal blue  
Where countless planets shine,  
With knowledge pure his mind imbue,  
Knowledge almost divine.

Glad man obeyed; to him the keys  
Of knowledge then were given;  
The elements obeyed his will,  
And owned him child of Heaven.

The lightning's glare that rends the sky,  
When storms in anger meet,  
Dread agent of destruction's power,  
Falls harmless at his feet.

He rides upon the briny deep,  
Where foaming billows rise,  
O'er rocks and hills with mighty speed  
At will he swiftly flies.

And science shows His handiwork,  
Who formed this world of ours,  
And bids us reverence and adore  
The God of wondrous powers.

Science, Religion's handmaid is,—  
Best boons to mortals given,  
Expanding all man's noble powers,  
Then leading him to Heaven.

## HEADS MAY DIFFER—HEARTS AGREE.

BY G. LINNÆUS BANKS.

THOUGH in matters of faith we can't always agree,  
And kneel at one altar together,  
Yet in friendship and love we united may be,  
Else our faith is not worth a feather.

Like the bee, whose philosophy, truthful indeed,  
Invites it each blossom to rifle,  
Let us glean what is noble and good from each  
creed,  
Nor with conscience and honesty trifle.

How much better and wiser the world might become,  
Would partisans cease their contention,  
Would the censor but pause, and the bigot be  
dumb,  
Nor strengthen the weeds of dissension;

But love one another, as brothers and men,  
In works of pure charity labor,  
Be true to the faith of their sires—and again  
Respect the same right in their neighbors.

[Selected.]



## WASHINGTON ALLSTON.

BY N. ALLISON.

**W**ASHINGTON ALLSTON, the celebrated poet and painter, was born in South Carolina, in 1779. While he was but six years of age his parents moved to Newport, Rhode Island, where his boyhood was passed. In describing his early life, we can not do him better justice than to give his history from the pen of Mr. Allston himself:

"I remember that I used to draw before I left Carolina, and that my favorite amusement was making little landscapes about the roots of an old tree in the country. The only particulars of these, which I can now call to mind, were a cottage built of sticks, shaded by little trees. Another employment was that of converting the forked stalks of the wild fern into little men and women, by winding about them different colored yarn. These were sometimes presented with pitchers made of the pomegranate flower. Such childish fancies were the straws by which, perhaps, an observer might then have guessed which way the current was setting for after-life.

"My chief pleasure was soon found in drawing from prints of figures, landscapes, and animals. But I soon began to make pictures of my own. The earliest compositions that I remember, were the Storming of Count Roderick's Castle, and the siege of Toulon, from a poor romance of that day. To these succeeded many others which have passed into oblivion.

"Though I never had any regular instructor in the art, I had much incidental instruction, which I have always through life been glad to receive from every one in advance of myself. There is no such thing as a self-taught artist, in the ignorant acceptance of the term; for the greatest genius that ever lived must be indebted to others, if not by direct teaching, yet indirectly through their works.

"I had, in my school-days, some of this latter kind of instruction, from a very worthy and amiable man, a Mr. King, of Newport, who made quadrants and compasses, and occasionally painted portraits. I used at first to make frequent excuses for visiting his shop that I might look at

his pictures, but finding that he always received me kindly, I went at last without any excuse, or rather with the avowed purpose of making him a visit.

"Sometimes I would take with me a drawing, and was sure to get a word of encouragement. It was a pleasant thing to me, some twenty years after this, to remind the old man of these little kindnesses.

"My leisure hours at college were chiefly devoted to the pencil, in composing figures and landscapes. I do not remember that I preferred one to the other; my only guide to the choice was the inclination of the moment."

At the age of twenty-two his love of painting, and enthusiasm for this employment, became so great, that he determined to visit the shrines of art in the old world. Accordingly he set sail for Europe, and arrived in London about the middle of June, 1801. Here he became a student at the Royal Academy. West was then in the zenith of his fame, and he kindly and warmly welcomed his fellow-countryman. Here is Allston's tribute to him:

"Mr. West received me with the greatest kindness. I shall not forget his benevolent smile when he took me by the hand; it is still fresh in my memory, and linked with one of a like kind which accompanied the last shake of the hand, when I took a final leave of him, in 1818. His gallery was open to me at all times, and his advice always readily and kindly given. He was a man overflowing with the milk of human kindness."

In 1804 Allston visited Paris, where he remained a few months. While there he painted a few compositions of his own, and made a copy from Rubens. Next he turned his face toward the sunny south, and passed nearly four years in Italy, remaining most of this time at Rome. In that wondrous city, where art and history have clustered their treasures, his existence was like a blissful dream. The climate, the association, the arts, the ruins, and every thing around him seemed perfectly adapted to his intellectual wants.

Here he met Coleridge, and happily passed the hours amid those ruins, and olive groves, as the wisdom and noble

sympathy of two such beings mingled in unison while sharing each other's society. Speaking of this distinguished person, he says:

"To no other man whom I have known, do I owe so much intellectuality as to Mr. Coleridge, who has honored me with his friendship for more than twenty-five years. He used to call Rome the *silent city*; but I never could think of it as such while with him; for meet him when or where I would, the fountain of his mind was never dry. Like the far-reaching aqueducts that once supplied this mistress of the world, its living streams seemed specially to flow for every classic ruin over which we wandered.

"When I recall some of our walks under the pines of the Villa Borghese, I am almost tempted to dream that I had once listened to Plato in the groves of the Academy. It was there he taught me this golden rule—'Never to judge of any work of art by its defects;' a rule as wise as benevolent, and one that, while it has spared me much pain, has widened my sphere of pleasure."

In personal appearance Allston was remarkable. His figure was slight, and his action significant of spiritual grace. His hair was long, and hung carelessly about his neck. His face was small, and showed a kind of nervous ruggedness—and his eyes were large and lustrous. His appearance was such, that the first sight of him made the beholder feel that he was a remarkable man. Even when passing along the street, there was an abstractive, unearthly air about him, that often made the careless stop to look at him; yet there probably never was so gifted a man more free from all consciousness of superiority.

His mind was not fixed upon reputation, but upon an exalted standard of excellence, toward which he earnestly pressed. No one who ever knew him can forget the grace of his social character; the simple hospitality with which he welcomed the visitor; his sweet encouragement to the young; and his ardent sympathy for every form of beauty and truth. Add to all this, a beautiful self-respect and child-like frankness, and nothing is wanting to win the hearts of all.

Allston's first wife was a sister of the late Dr. Channing. After her decease he was married to a sister of Dana, the poet, with whom he lived till his death, which took place in 1843. His life was one of earnest communion with the true and the beautiful; and his conversation was often tinged with the colorings of the spiritual world.

His language was never more clear, significant, and spiritual than on the night of his death. This event was very unexpected. He had painted all day, and with usual cheerfulness spent the evening in conversation. At a late hour he complained of a pain in his breast, to which he had been occasionally subjected. His wife left the room to bring some remedy, which had relieved him on former occasions. When she returned he was leaning back in his chair, apparently in a doze. She touched his shoulder; his eyes opened with a calm, sweet expression, and closed again. He sighed gently, and ceased to breathe.

Thus was softly loosened the tie that bound that gifted and pure spirit to mortal life. He passed away at the age of sixty-four years, in the full activity and consciousness of his powers, without any struggle or decay. The memory of such a man is worthy of being enshrined in the hearts of his countrymen.

#### ACHIEVEMENT OF SCIENCE.

**T**HE following description of the practical importance of the science of navigation, the value of the magnetic needle, and illustration of mystery, reason, and faith, is from a little essay, by the Rev. Mr. Peabody, of Boston:

Night comes down over a ship at sea, and a passenger lingers, hour after hour, alone on the deck. The waters plunge and welter, and glide away beneath the keel. Above, the sails tower up in the darkness, almost to the sky, and their shadow falls a burden on the deck below.

In the clouded night no star is seen, and as the ship changes her course, the passenger knows not which way is east, or west, or north, or south. What island,

what sunken rocks may be on her course, or where they are, he knows not. All around, to him, is *mystery*. He bows down in the submission of utter ignorance.

But men of science have read the laws of the sky. And the next day this passenger beholds the captain looking at a clock, and taking note of the pace of the sun, and with the aid of a couple of books, composed of rules and mathematical tables, making calculations. And when he has completed them, he is able to point almost within a hand's breadth to the place at which, after unnumbered windings, he has arrived in the midst of the seas.

Storms may have beat, and currents drifted, but he knows where they are, and the precise point where, a hundred leagues over the water, lies his native shore. Here is *reason* appreciating and making use of the revelations of science.

Night again shuts down over the waste of waves, and the passenger beholds a single seaman stand at the wheel, and watch, hour after hour, as it vibrates beneath a lamp, a little needle, which points ever, as it were, a living finger to the steady pole.

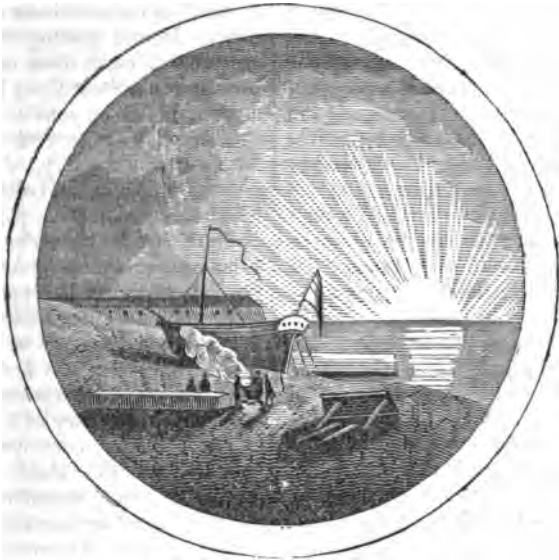
This man knows nothing of the rules of navigation, nothing of the course of the sky. But reason and experience have given him *faith* in the commanding officer of the ship, faith in the laws that control her course, faith in the unerring integrity of the little guide before him. And so without a single doubt, he steers his ship on, according to a prescribed direction, through night and the waves.

And that faith is not disappointed. With the morning sun, he beholds far away, the summits of the gray and misty highlands, rising like a cloud on the horizon; and as he nears them, the hills appear, and the lighthouse at the entrance of the harbor, the spires of the churches and the shining roofs, a sight of joy—and he tries to detect his own dwelling.

If you mean to be happy when old, be temperate when you are young.

Dare to be good though the world laugh at you.

## Coats of Arms, or State Seals.—No. 4.



### NEW HAMPSHIRE.

**T**HE seal of the State of New Hampshire is represented by a landscape scenery, the foreground of which consists of land, and beyond this extends water until it appears to meet the sky. On the verge of the distant horizon may be seen the rising sun—an emblem of the rising destiny of the state.

Near the edge of the water is a ship resting on the stocks, and some men near by are preparing to pitch it. From a pole in the stern the American banner is displayed. This state has no motto, but around the seal, in Roman capitals, are the words SIGILLUM REIPUBLICÆ NEW HAMPTONIENSIS, 1784—"The seal of the State of New Hampshire." The date, 1784, indicates the time when the state constitution was adopted.

New Hampshire is one of the Eastern or New England States, lying north of Massachusetts, with Vermont on the west, and Maine on the east. It is 180 miles long from north to south, and 87 miles wide in the southern part, containing about 9,500 square miles. It has only eighteen

miles of sea-coast. Portsmouth, the only harbor, is situated on a peninsula on the south side of the Piscataqua river, and some three miles from the ocean. It is an excellent harbor, and, owing to the rapidity of the current, is never frozen.

This state was settled early in 1623, at Dover and Little Harbor, by two small parties of emigrants sent over from England under the directions of Captain John Mason and Sir Ferdinand Gorges, who were two active members of the Plymouth Council, established by King James I., for making settlements and administering the government of New England. Little Harbor is at the southern entrance of Portsmouth harbor, and about two miles below the city. Dover is twelve miles northwest of Portsmouth.

Some twenty miles from the ocean, the country becomes hilly, and toward the northern part are the White Mountains—a continuation of the Alleghany range. Towering above all surrounding objects rises Mount Washington, 6,428 feet above the level of the sea. This is the second



highest peak east of the Rocky Mountains, Mount Black, in North Carolina, being 6,476 feet high.

Mount Washington is visited by many persons every summer, on account of the wild and beautiful scenery around, and the magnificent and almost boundless prospect afforded from its summit. Situated in the northern part of the mountain is a remarkable gap, called the *Notch*. To an admirer of the wonders of nature, this is one of the grandest natural curiosities in the Union.

The passage through the Notch is so narrow as to allow only room enough for a road and the Saco, which here is a mere brook, some four feet in breadth. A road was first made through this defile in 1785. This remarkable passage, and the views from its summit, afford a rich repast to the traveler.

The Notch was the scene of a fearful catastrophe some years since. A severe storm of rain deluged the mountain, and poured such a flood upon the valleys and plains below, that the effects of it will remain for centuries. Such deep trenches were cut that vast bodies of earth and rocks fell from the mountain.

On the night of the 28th of August, 1826, one of these landslides or avalanches descended in the rear of a house occupied by Mr. Calvin Willey and family, amounting in all to some ten or eleven persons. The family heard the noise and fled from the house in their night clothes. By this act they threw themselves in the way of destruction; for one of the slides, a hundred feet high, stopped within a few feet of the house, but another carried away the barn and overwhelmed the family.

It was some time before any of this family were found, and the bodies of several of them were never discovered. The last remains were those of a child, found in 1846. This catastrophe will always afford the traveler a melancholy subject of reflection.

At Franconia, in the White Mountains, is a remarkable rock, which, when viewed from a particular point, resembles the human profile, and hence it has received the name of *The Old Man of the Mountains*. This peak rises about one thousand feet above the valley below.


The State of New Hampshire is divided into ten counties, and contains a population of 300,000. Its capital is Concord, situated on the west bank of the Merrimack river. In and passing through this state are some thirteen lines of railroads, comprising in all about three hundred and fifty miles. It has no canals.

This state has several lakes remarkable for their fine scenery. The most distinguished of these is Lake Winnipiseogee, which is noted for its picturesque shores, and numerous beautiful islands. It is twenty-three miles in length and ten in breadth, in the widest part.

New Hampshire holds its election on the second Tuesday in March, and its legislature meets the first Wednesday in June. The governor is chosen once a year, and receives a salary of \$1,000.

The principal employments of the inhabitants of this state are agriculture, lumbering, and manufactures. Upward of 40,000 logs are annually cut and transported to the Merrimack, to be floated down that river. Far less manufacturing is carried on here than in Massachusetts. Granite being found throughout this state in such abundance, it has very appropriately been called "The Granite State."

### LETTER WRITING.

 o accomplish within the scope of human knowledge is so beautiful in all its features as that of epistolary correspondence. Though distance, absence, and circumstances may separate the holiest alliances of friendship, or those who are bound together by the still stronger ties of affection, yet the power of interchanging thoughts, words, feelings, and sentiments, through the medium of letters, adds a sweetness to the pain of separation, renovating to life, and sanctifying to the temple of happiness.

The wide ocean may roll between those who have passed the social years of youth together, or the snow-capped Alps may rise in sublime grandeur, separating early associates; still young remembrances may be called up, and the paradise of memory made to bloom afresh with unwithered flowers of holy recollection.

Though we see not eye to eye and face to face, where the soft music of a loved voice may fall with its richness upon the ear, yet the very soul and emotions of the mind may be poured forth in such melody as to touch the heart "that's far away," and melt down the liveliest eye into tears of ecstatic rapture.

The great beauty of epistolary conversation consists in a mysterious union of mind and spirit. In it may be exhibited those powers of divinity which characterize our loftiest nature. It explains even, and proves, that we are more than mortal. All animated nature except man must be present to communicate knowledge, if such can be communicated by them.

But man has the superiority. His immortality is transmitted to paper, from thence to his fellow-being, to whom it speaks in tangible form; and if no other proof of the undying nature of that mysterious, incomprehensible spark of life were given, this in itself would be sufficiently strong.

Without the ability to practice the refined art of epistolary correspondence, men would become cold and discordant—an isolated compound of misanthropy. They would fall off in forsaken fragments from the great bond of union which now adorns and beautifies all society. Absence, distance, and time would cut the silken cords of parental, brotherly, and even connubial affection. Early circumstances would be lost in forgetfulness, and the virtues of reciprocal friendship "waste their sweetness on the desert air."

Since, then, the art and practice of letter writing is productive of so much refined and social happiness, a laudable indulgence in it must ever be commendable. While it elevates the noble faculties of the mind, it also chastens the disposition, and improves those intellectual powers which would otherwise remain dormant and useless.

Notwithstanding the various beauties and pleasures attendant upon the accomplishment, yet there are many who have given it but a slight portion of their attention, and have therefore cause to blush at their own ignorance when necessity demands its practice. There is no better

mode by which to test the acquirements of either a young lady or gentleman than from their letters.

Letters are among the most useful forms of composition. There are few persons who can read or write at all, who do not frequently have occasion to write them. And an *elegant* letter is much more rare than an elegant specimen of any other kind of writing.

In addition to the preceding remarks on the subject of epistolary writing, we here give a few extracts, consisting of general directions, which will be useful to those who wish to improve in this valuable and interesting exercise.

"A letter should embrace the following particulars, namely:—1st. The date. 2d. The complimentary address. 3d. The body of the letter. 4th. The style, or complimentary closing. 5th. The signature. 6th. The address, with the title, if any.

"The date should be written near the right hand upper corner of the sheet. The complimentary address follows, a little lower down, near the left hand side of the sheet. The body of the letter should be commenced very nearly under the last letter of the complimentary address. The style, or complimentary closing, should stand very nearly under the last word of the body; the signature very nearly under the last word of the style; and the address should be placed a little below the signature, and toward the left hand side of the sheet.

"In very formal letters, the address should precede the letter and the signature, so that the individual addressed may, at first sight, perceive that the communication is intended for him, before he has taken the trouble to read it through. In this case the date may be written below, in the place of the address."

Think what you would say to the person, to whom you are writing, were they with you, and then write those thoughts on paper. The secret of being able to write a good letter lies simply in "talking upon paper." In doing this, "Let the heart speak," and you have the whole mystery of letter writing.

The following forms will serve to illus-

trate the position of the various parts of a letter, and also give an idea of the general style in which letters should be written.

#### FORM OF A BUSINESS LETTER.

*Mount Vernon, Knox Co., Ohio,*  
*July 30, 1860.*

*Messrs. Fowlers and Wells,*  
*New York.*  
*Gentlemen,*

*Inclosed I send you ten dollar, for*  
*which you will please forward to my address fifteen copies of*  
*"The Student" for one year, commencing with May, 1860.*

*Yours respectfully,*  
*J. L. Clark.*

#### FORM OF A COMMON LETTER.

*131 Nassau street, New York,*  
*Aug. 1, 1860.*

*My Dear Sir,*

*I have endeavored, in the preceding article, to present*  
*a few plain directions for letter writing, which, I hope, will be intel-*  
*ligible and useful.*

*For more complete directions concerning the forms of different*  
*styles of letters, also of notes, cards, etc., allow me to refer you to*  
*"Parker's Aide to English Composition," published by Messrs.*  
*Harper and Brothers, of this city, from which I have made a few*  
*extracts for the accompanying article. This work you will find a*  
*valuable aid in any department of composition. Wishing you great*  
*success in the pursuit of knowledge,*

*I remain very truly yours,*  
*N. A. Calkins.*

*Mr. Stephen E. Paine,*  
*Saratoga Springs, N. Y.*

The following form of the letter when superscribed and ready for mailing, will convey an idea of the shape it should present when finished, and on what part of it the address or superscription should be written:

*Mr. Stephen E. Paine,*  
*Saratoga Springs,*  
*N. Y.*

From this form it may be seen that the address is placed near the middle of the letter. The name of the post-office is written below the address, and the state is placed below all, in the right hand corner.

It is well, in all business letters, to write the name of the persons addressed, and their post-office, at the commencement of the letter, as above; this enables those receiving it to perceive at once for whom it is intended; and when a copy is taken by a letter-press, the name and address are preserved in a prominent place. The name of the county, as well as the post-office and state, should be given in all cases, both in the date and superscription, unless the place be a city or large town.

In business letters, the great objects should be clearness, conciseness, and precision. Say all that is necessary to be said, and say it respectfully, but without circumlocution. Write not a superfluous word, yet let the letter give all the necessary particulars of the business to which it refers.

#### THE VALUE OF A SMILE.

Who can tell the value of a smile? It costs the giver nothing, but it is beyond price to the erring and relenting, the sad and cheerless, the lost and forsaken. It disarms malice, subdues temper, turns hatred to love, revenge to kindness, and paves the darkest paths with gems of sunlight.

A smile on the brow betrays a kind heart, a pleasant friend, an affectionate brother, a dutiful son, a happy husband. It adds a charm to beauty, it decorates the face of the deformed, and makes a lovely woman resemble an angel in paradise. Who then would not wear a cheerful, smiling countenance?

## Science,

"Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### EVAPORATION OF WATER AND FORMATION OF DEW.

BY T. ANTISELL, M.D.

**W**E can scarcely estimate sufficiently the benefits of the sun's rays playing on the surface of the ground. To it are we indebted for the "gentle dew from heaven," the genial shower, the underground springs, and the rolling river. But for the sun, the world would be one universal Sahara, untenanted by a single plant. The whole of the waters of the globe would be concentrated into one spot, and no lakes, rivers, or inland seas of any magnitude would exist. Wherever it shines brightest, there exist the greatest amount of vegetation, and the largest rivers on the globe.

The action of the sun upon the waters of the tropical seas contributes to these results. Shining with intense heat, and aided by the cooling winds, it raises a large quantity of watery vapor, which is carried up by the currents of air to the higher regions of the atmosphere, where it floats in the form of clouds. These are drifted north and south in various directions, and scattered overhead in the temperate zones. It is only in the torrid zone that this process of cloud-forming is carried on at all periods of the year; in the more temperate climes it is confined to summer seasons.

In the polar regions no clouds are formed because the water is nearly always solid, and the air is so cold as to convert any portion of water into snow or ice almost immediately. The coldness of the air is sometimes produced in temperate latitudes by a current from the poles rushing suddenly southward, and cooling the air it forces through. When it is thus cooled below the point at which it can sustain a cloud, the latter immediately falls as rain. The approach of two clouds charged with electricity produces a like result, and rain is also produced by a cloud touching a mountain top or side.

Dew is the vapor of water precipitated during the night, in little drops, upon the surface of plants and other bodies, and it takes place oftenest when the sky is serene and cloudless. The older alchemists regarded it with interest, as an exudation from the stars, in which they hoped to find gold. Others believed it was a kind of rain which ascended from the earth. After the deposition of dew, if the sky should become cloudy, the little drops of water will rapidly disappear.

Dews are more frequent on the coast than in the interior; and in the central parts of Asia and Africa they scarcely ever occur. They are produced by a lowering of the temperature of the beds of air which are in immediate contact with the ground, and the substances covered are always those which are colder than the surrounding air, or than those bodies on which no deposit takes place.

In fact, dew is a deposit of water previously existing in the air as vapor, and which loses its gaseous form only in consequence of being chilled by contact with colder bodies. The same principles are observed in the well-known phenomenon, when a glass or pitcher containing very cold water becomes wet on the outside, by the cooling of the vapor in the surrounding air. This phenomenon, by some, is erroneously attributed to the "sweating" of the vessel. To ascertain the cause of the phenomenon of dew, it is necessary to discover the cause of the reduction of temperature.

Every body in nature is constantly receiving rays of heat from other bodies, and giving them off or radiating them in turn; and the temperature of any body can only remain stationary when it receives from surrounding objects as many rays as it emits. If a substance be so situated that its own radiation may continue uninter-

ruptedly, without an equivalent being returned to it, its temperature must necessarily fall. Such is believed to be the condition of the ground on a starlight evening.

The heating rays which are emitted on such an evening, from substances on the surface of the earth, are dispersed into the air and are lost in free space. Nothing is present in the atmosphere to exchange rays with them, and their temperature consequently lowers. If, on the contrary, the weather be cloudy, the radiant heat proceeding from the earth is intercepted by the clouds, an interchange is established, and the ground retains nearly, if not quite, the same temperature as the adjacent portions of air.

When the bodies on the earth's surface have become cooled in the way described, the air which surrounds them becomes cooled also, and deposits its watery vapor on the colder bodies. On cloudless nights every substance does not radiate heat equally well, and become proportionably cold. Bodies with sharp points effect this purpose best; such as grass, wood, the leaves of plants, and filamentous substances in general. These will reduce the temperature ten and even fifteen degrees below that of the surrounding air. While bodies which are imperfect radiators, such as polished metal or smooth stone, are hardly ever moistened, and scarcely below the temperature of the air about them, consequently no dew is deposited on them.

### General Intelligence.

**DEATH OF PRESIDENT TAYLOR.**—ZACHARY TAYLOR, the twelfth President of the United States, died at Washington, at thirty-five minutes past ten o'clock, on the evening of the 9th of July, after an illness of little more than five days. His last words were, "I am prepared—I have endeavored to do my duty."

ZACHARY TAYLOR was born in Orange county, Virginia, Nov. 24th, 1784, consequently he would have been sixty-six years old had he lived till next November. He worked on a farm till he was twenty-one years of age, when he entered the army,

where he spent the principal part of his life, till the time of his election to the office of President of the United States.

This is the second time in the history of our Union that a president has been removed by death while in the discharge of the duties of his office.

**THE COMET.**—During the middle and latter part of last month, the comet was visible to the naked eye. The tail was only five degrees long, and too faint to be discovered without the aid of a telescope. On the 20th ult. its velocity was one hundred thousand miles an hour—and its distance from the sun one hundred millions of miles. It passed its perihelion on the 22d of July.

**CANAL ACROSS THE ISTHMUS.**—A treaty has been concluded between the United States and Great Britain for the purpose of constructing a ship canal across the Isthmus of Darien, thus uniting the Atlantic and Pacific oceans. This will greatly facilitate a voyage to California and the Pacific shores from the Atlantic ports.

**VOLCANOE IN OREGON.**—The Oregon Spectator of March 21, states on authority of gentlemen who were eyewitnesses to the fact, that the mounts St. Helen and Baker were both sending forth volumes of smoke, giving undoubted evidence that their volcanic fires are not yet extinguished. The craters from which the smoke was issuing in St. Helen were two in number, and low down on the north and northeast sides; while in Mount Baker, which is a perfect cone, the smoke was issuing in dense masses from the center of the summit. It is probable that these are the only living volcanoes in Oregon.

MORE than twenty-five thousand persons are said to have visited the American Museum, in this city, on the fourth of July. The receipts of that day are stated to have been \$4327, being the largest sum ever taken there in one day.

**THE STEAMER ATLANTIC.**—This noble American steamship left Liverpool on the 10th ult., and arrived at New York on the 20th of July, having made the passage in *ten days and fifteen hours*. This is the quickest passage ever made from port to port. The distance is about 2820 miles.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### JUST FOR FUN.

BY MISS ELIZA A. CHASE.

**C**OME, James, let us have some sport," said George Caswell to his schoolmate, James Harley, one morning before school-time.

"Agreed. What is it?" returned James.

"Here comes Will Smith, who is so afraid of powder. Let us throw these fire-crackers after him and see him run."

"But, George, it will frighten him so," said James.

"O never mind; we'll do it just for fun, you know, and what if he does cry a little? A piece of candy from his mother will cure him," answered George; and saying this he threw the lighted paper directly before the boy.

A start, and a quick scream showed that George was having what he called fun, and the terror of the poor boy, far from exciting the pity of his thoughtless companions, only increased their desire to frighten him. In rapid succession the instruments of his fear exploded, now before him, now behind, and again at his feet, or directly overhead. Onward he sped, fear seeming to give him wings, till coming to a steep bank, his foot hit a stone, and he rolled helplessly down the declivity.

Pleased with the success of their sport, the boys returned to the school-house, and played as merrily as if they had not tortured a fellow-being. Yes, it was torture.

Poor William! Though nearly of the same age as his tormentors, he was very deficient in physical courage, some said in intellect and his fear of

powder was heightened, if not caused by a terrible accident which happened to his brother, who in carelessly playing with a powder-horn, suffered it to explode, injuring himself fatally, and severely burning William, at that time some seven years of age.

Mr. Smith's anger knew no bounds when his son, pale and exhausted, reached home, and no confessions or apologies of the boys, no sincere promises of amendment, no tears—for when they reflected on their barbarous conduct they wept—could induce him to abate his indignation. For miles around the story spread, with the addition that George Caswell was the worst boy in the county.

This was a wrong statement. George was not a bad-hearted boy. He was fond of mischief, of playing tricks on others, but no one regretted more than he the real injury he had done. Yet it must be confessed many of his tricks showed too plain a disregard for the feelings and rights of others, and he frequently forgot that what was sport to him was distress to his comrades.

Years passed on; Mr. Smith had removed from the place and the occurrence was forgotten. George, being left alone by the death of his parents, went to the West to try his fortune. At Detroit he happened to save a child from being run over, and the father, a partner in an extensive bookstore, engaged him as a clerk, in gratitude for his timely assistance. "I can not engage you permanently," said Mr. Davis. "My senior

partner, Mr. Smith, is now in New York, but on his return I will consult him, and I doubt not we shall make a satisfactory arrangement with you."

George entered upon his new duties with zeal and activity, and being a good accountant, he was promoted to the office of book-keeper, with the promise of a salary of five hundred dollars a year if he should remain. Mutually pleased with each other, the time passed pleasantly with George and his employer, when one day Mr. Smith entered the store. After the usual greetings between the partners, Mr. Davis called George, and introduced him to Mr. Smith.

The brow of the latter instantly became clouded, and with a tone of anger, not unmingled with scorn, he said, "I think I have had the honor of meeting Mr. George Caswell before this, and in circumstances quite different from those of a clerk in my store;" and as George raised his eyes in wonder at this unexpected address, he recognized the father of William Smith.

"You may retire, sir," he continued, as, with a look of distress, George was about to address him.

"If you knew how sincerely I regret my thoughtless cruelty," interposed the young man; but the relentless Smith pointed to the door of the counting-room and turned away. George withdrew, and Mr. Smith related to Mr. Davis the story of his wrongs, adding, "That boy shall not stay another day in the store."

In vain Mr. Davis represented his intelligence, his usefulness, and his situation, without friends in a strange land, and plead that he might be forgiven. Mr. Smith was inexorable, and George, whose heart that morning beat high with hopes of future success and joy at his pleasant situation, was at night peremptorily dismissed.

Mr. Smith, though a very passion-

ate man, was not usually so vindictive; but he was inflamed by the contrast of the fine-looking, intelligent young man to his own son, who, as he grew older, became more and more imbecile, till he was unfit for any intellectual employment, a misfortune which his father wrongly attributed to the fright he had received.

Sad at heart, and almost desponding, George entered another store to which he had been directed by Mr. Davis, but by means of the intimacy of the clerks of the two firms, the story of his dismissal, coupled with the name of a bad young man, had preceded him, and he was firmly and, as he thought, sternly refused. For several days he was unsuccessful in his efforts to obtain business, but by means of his friend, the kind-hearted Davis, he obtained a place, with a salary of three hundred dollars.

By the advice of his friend he frankly stated to his employer his difficulty with Smith, concealing nothing, nor attempting to palliate his conduct, which he now looked on as cruel and unmanly. His frankness, and the recommendations of Davis, secured him the place, and though inferior in every respect to his situation with Smith, he felt it was but a just punishment for his youthful thoughtlessness and indiscretion.

#### A WORD TO LITTLE GIRLS.

**H**OW TO BE LOVED.—Who is lovely? It is that little girl who drops sweet words, kind remarks, and pleasant smiles, as she passes along, who has a kind word of sympathy for every girl or boy she meets in trouble, and a kind hand to help her companions out of difficulty, who never scowls, never contends, never teases her mates, nor seeks in any other way to diminish, but always to increase their happiness.

Would it not please you to pick up a string of pearls, drops of gold, diamonds, and precious stones, as you pass along the streets? But these are the true pearls and precious stones which can never be lost. Take the hand of the friendless. Smile on the sad and dejected. Sympathize with those in trouble. Strive everywhere to diffuse around you sunshine and joy. If you do this, you will be loved.

Dr. Doddridge one day asked his little girl why it was that every body loved her?

"I know not," she replied, "unless it be that I love every body."

This is the true secret of being beloved. "He that hath friends," says Solomon, "must show himself friendly." Love begets love. If you love others, they can not help loving you. So, then, do not put on a scowl, and complain that nobody loves you.

If nobody loves you, it is your own fault. Either you do not make yourself lovely by a sweet, winning temper, and kind, winning ways, or you do not love those of whom you complain.—  
*Anecdotes of Girls.*

## HOW THE SPIDERS CATCH THE FLIES.

BY S. W. LETON.

I AM a very little girl,  
But also somewhat wise,  
I want to tell the young and old  
How spiders catch the flies.

'Tis a very curious thing,  
How handily they twist  
Their cunning net of finest gauze  
And not a stitch is missed.

I wish our little misses here  
Had fingers just as nimble,  
To work with equal speed and care,  
With needle, thread, and thimble;

And when they knit and narrow off  
Their work where it is wider,  
They'd try to *never drop a stitch*,  
Like careful Mrs. Spider.

She's persevering, diligent,  
Alert, and active too;  
Let little girls be just the same,  
In all they have to do.

But, O, I'll tell you now the way  
She always goes to work;  
She does not *fret*, and *pout*, and *vex*,  
And do it with a jerk;

However much the trouble be,  
She's still in gentle mood;  
She never spoils her pretty work,  
She *always does it good*.

But Mrs. Webb, I'll call her so,  
Has many another plan,  
By which she does her work so well—  
As well as e'er she can.

You'd be surprised to see her look,  
And watch the clouds and weather,  
That she may know when it is time  
To get the things together.

And when it is, she is so quick,  
And off, too, in a dash,  
Along the fence to spread her web,  
Or 'cross the window sash.

She spins her thread and glues it fast,  
And turns and twists it round—  
You'll not catch her to stop her work  
For *something to be found*.

She has it all, like housewife nice,  
In pocket or in hand,  
Else, like some little ones I know,  
Her work would have to stand.

I wish all little girls would watch  
The time for work and school—  
Be off so quickly to their tasks,  
By Mrs. Spider's rule.

Who then would have to look  
For scissors, thread, or needle,  
Or take their work and when begun  
Would break off in the middle.

In palaces of kings she often goes  
To spread her little net;  
Full well she knows where dainties are,  
And she the flies will get.

I wish, indeed, all those that hear  
My lesson, understood,  
Like Mrs. Webb, to know the place  
Where they might get *some good*.



She's not the one to drop a stitch,  
To undo work, or patch,  
For then I know what she would miss—  
Not a fly could she catch.

What double toil she seems to take  
Till she her prize secures—  
O little, idle, careless girl,  
I wish such care was yours.

Come, only try this industry,  
And work like Mrs. Spider,  
She does it by her little self,  
No teacher kind to guide her;

While you have pretty books and friends  
To teach you to be good;  
Do only try, I know you can  
If you but only would.

Come, spread your little net to catch  
A better, brighter prize;  
Grow rich, not in shining gold,  
But rich in being wise.

Then don't you go away to-day,  
And carelessly forget  
How Mrs. Webb both weaves and spins  
Her pretty, useful net.

O let us all do just like her;  
Indeed, there's no mistake,  
But that we shall do just as well  
If we her trouble take.

I want the young and old to know  
How spiders catch the flies,  
For that's the way, by *trying hard*,  
We may grow *good and wise*.

Then dig for wisdom as for gold,  
Or treasures that are hid,  
You'll finish off your work as well  
As Mrs. Spider did.

You know the way that Mrs. Webb  
Did spin and catch the flies,  
Now go to-day and try as hard  
To be both **GOOD AND WISE**.

—♦—  
**TRUTH** is of holy and heavenly origin; it contains the germ of immortality and must triumph; for

"Truth crushed to earth shall rise again,  
The eternal years of God are hers;  
While error wounded, writhes in pain,  
And dies amid her worshippers."

## THE TWO TRAVELERS.

**T**HE following story of a noble act of humanity is from the interesting German tales of Krumacher:

Two travelers once rested on their journey at an inn, when suddenly a cry arose that there was a fire in the village. One of the travelers immediately sprang up and ran to offer his assistance. But the other strove to detain him, saying, "Why should you waste your time? Are there not hands enough to assist? Why concern ourselves about strangers?"

His friend, however, listened not to his remonstrances, but hastened to the fire, the other following and looking on at a distance. A woman rushed out of the burning house, crying, "My children! my children!"

When the stranger heard this, he darted into the house among the burning timbers, while the flames raged fiercely around him. "He will surely perish!" cried the spectators.

But after a short time, behold, he came forth with scorched hair, carrying two young children in his arms, and delivered them to their mother. She embraced the infants, and fell at the stranger's feet, but he lifted her up and comforted her. The house soon fell with a terrible crash.

As the stranger and his companion returned to the inn, the latter said, "Who bade thee risk thy life in such a dangerous attempt?"

"He," answered the first, "who bids me put the seed into the ground, that it may decay and bring forth the new fruit."

"But if thou hadst been buried among the ruins?"

His companion smiled and said, "Then should I myself have been the seed!"

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## Natural History.

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### THE PEACOCK.

BY HENRY WILSON.

**I**T is generally supposed that the peacock was originally a native of India, and that from thence it has been diffused over the whole world. This bird is mentioned in the Bible, as being among Solomon's importations from the East, to gratify the taste of that monarch.

The peacock is about five feet long, including the train, which is usually more than three feet in length. The head is small and crowned with a tuft of feathers having webs only at the ends, and colored with the finest green mixed with gold. The neck is long and small, tapering gracefully from the breast upward. The body is about the size of a common turkey.

The colors of the peacock are very splendid, and most beautifully arranged. The back and wings are of a light ash color, mingled with black; the head,

neck, and breast are of a greenish blue, with a beautiful gloss tinged with gold. The eyes are set between two stripes of white.

The train of the peacock is the most beautiful part, and, when spread erect in a half circle, forms a fan of most resplendent hues. The two middle feathers of the tail are sometimes four feet in length. The colors of the feathers composing the tail are green, blue, purple, and gold, forming a beautiful changeable mixture. Toward the end each one has a dark spot, surrounded with gold and green, which gives them an appearance somewhat like eyes.

Among the Romans peacocks were held in the highest estimation. With the wealthy men of the imperial city they became fashionable as an article of food. It was not, however, because

of their goodness that these birds were so highly esteemed, but from the fact that they were so expensive that only few persons were able to offer so costly a dish. Absurd as such notions may seem to us, we need not visit Rome to find, even in our own day, those who possess this same foolish pride.

In Greece, at one period, a pair of peacocks would sell for one hundred dollars. When Alexander the Great was in India, he was so pleased with their beauty that he fixed a heavy fine as a punishment on any person who should destroy one of them. About that time a pair of these birds were taken to Athens, and so great a curiosity were they, that the rich went from all parts of Greece to see them.

It was some four or five hundred years ago that these birds were much used at the entertainments of the great. Their flesh is tough, and but insipid eating compared with that of other birds, hence they were often used more for an ornament at the table than for food.

In later times, when preparing them for the table, the skin was carefully taken off, leaving the feathers on it, and the flesh preserved with spices and salt, after which the skin was drawn on again, so that the bird appeared in full plumage. Thus fitted up it was kept for several years, and set on the table in full dress on great occasions. At weddings, and other high times, they filled the beak and throat of the bird with cotton soaked in camphor, and set it on fire.

For the beauty of its plumage, few of the feathered race can compare with the peacock. But this poor bird can boast of nothing but outside show. His voice, which is a kind of scream, is unpleasant, and even shocking to the ear. His legs are black, and so homely that it is said he will seldom if ever look at them himself.

He is a voracious eater, and de-

vours plants, seeds, corn, and insects without distinction. In gardens and planted fields, he is such an intolerable nuisance, that his owner is often obliged to pay for the damages he commits.

"The disgusting habits and bad conduct of this bird, therefore, make him a disagreeable companion, notwithstanding his beauty. So that those who are well acquainted with him, take little notice of his dress, his character being a matter of much more consequence to them than the fine appearance of his feathers.

"Let this be a lesson to those who expect that personal beauty and external show, rather than good qualities, will gain them permanent respect and virtuous influence in the world. The truth is, that personal beauty, like the peacock's plumage, after being a little while admired, if not combined with other charms, is soon forgotten or despised.

"Let a person be ever so richly dressed, and ever so handsome, if he is disgusting in his manners, and overbearing in his conduct, he will soon find himself shunned and hated by every body; whereas, a person of amiable and obliging manners, if neither handsome in person, nor dressed in fine clothes, will always be beloved, and always have influence, wherever he goes."

WHAT I LOVE TO SEE.—I love to see a child, when playing with brother or sister, always gentle and kind.

I love to see a child, when sent on an errand, immediately start and promptly perform the duty, and then at once return home.

I love to see a child, when sent to school, not loiter by the way, but reach the school-room at the time the teacher enters.

## TAILOR BIRDS.



## THE ORCHARD ORIOLE AND NEST.

**A**MONG the birds that display the most wonderful skill in the construction of their nests is the Orchard Oriole. This bird usually selects an apple tree, or the drooping branches of a weeping willow as a suitable place for building her nest and rearing her young.

When the place has been chosen, she usually resorts to a meadow, or some spot where long and tough grasses may be obtained. These are collected and made fast to the twigs immediately around the chosen place. Sometimes, however, a cluster of leaves serve the purpose of these blades of grass, by being firmly secured to the branch with some fibrous substance.

The leaves, and the blades of grass when thus used, are knit or sewed together with some fibrous substance like hemp or flax. Frequently horse-hair or fine tough grass is used. The bill serves as a needle, which, aided by the mouth and feet, performs the part of the tailor. Thus the nest is sewed through and through in every possible direction.

The nest is from three to four inches in depth, and lined on the inside with some soft substance. This bird is easily kept in cages, and when thus confined it will sing with the liveliness that it shows in its wild state. The Orchard Oriole is found in our country, but is more common in the southern than in the northern states.

Mr. Wilson, the American Ornithologist, once showed one of these nests to an old lady, and after admiring the workmanship she asked him if he did not think that these birds could be taught to *darn stockings*. Mr. Wilson drew out one of these grass threads which measured thirteen inches, and in that distance the bird which had used it, had passed it in and out thirty-four times.

In the West Indies there is a starling which will cut leaves into the shape of a quarter of an orange rind, and then sew the whole very neatly to the side of a banana leaf, so as to make one side of the nest.

There is another kind of bird found in the East Indies, called the Tailor Bird, because it sews so well. It first picks out a plant with large leaves, then gathers cotton, and with the help of its fine long bill and slender little feet it spins this cotton into a thread. Then using its bill for a needle, it sews these large leaves together to hold its nest.

This is the most wonderful of all the tailor birds. From the curious skill displayed by these little creatures, we may learn to not be proud of our attainments; for we may often meet with many of the lower animals that understand and practice things before we find them out. The same Being who made and taught us, also makes and teaches these little creatures their wonderful skill.

— — —  
SCORN to do a mean action.

## LESSONS IN BOTANY.—No. 4.



## NATURAL CLASSES.

BY FLORA MILFORD.

**I**N observing the many flowers with which nature is so profusely ornamented, we perceive an analogy between them, which leads us to arrange them into classes. This we do in reference to some peculiar natural mark or characteristic. Thus all rose-like flowers we combine together, and this constitutes the natural family Rosacea, embracing the true Floral Queen, the Rose, sung by poets, immortalized by sculptors, and admired by all, since the date of its existence.

Persia is the native land of the rose, where it is extensively cultivated for the purpose of making the celebrated perfume, the Attar or Otto of Roses. The Persians have a curious fable concerning the origin of the rose.

A beautiful maiden had been unjustly condemned to the stake, by the machinations of a wicked man. As

the pile was lighted, the flames gathered together in one fierce mass, struck her prosecutor, and blasted him on the spot; while the stake to which she was bound, budded and blossomed with red and white roses, as if to attest the maiden's innocence.

Besides the genus *Rosa*, this family includes those plants having a corolla with five roundish petals, with short claws, and with numerous stamens inserted on the calyx, embracing the apple, peach, plum, quince, etc., together with the raspberry and strawberry. This family contains most of our finest fruits, and is remarkable for including very few poisonous plants.

The natural family Liliaceæ is very beautiful, embracing the lily in its splendid varieties, the magnificent tulip, the queenly iris, the crown-imperial, and the dog-tooth violet, a beautiful wild flower. This family is

characterized by having six petals spreading in such a manner as to give the flower a bell-form appearance, three or six stamens, the germ triangular, with three cells, and the root bulbous.

The lily is a splendid flower, and well worthy of being associated with the rose, as it frequently is, and it was selected by the great Teacher to prove the universal care of the Father, "Yet I say unto you, Solomon in all his glory was not arrayed like one of these." The symbolical language of the white lily is "Purity," and no one who has seen this delicate flower will doubt the appropriateness of this language.

It was the tulip which created so much excitement among the Dutch florists several years ago. "About the middle of the seventeenth century, the rage for tulips was so great that some were sold for four thousand dollars, and one variety, called the Vice-roe, for ten thousand; but this extraordinary traffic was checked by a law, that no tulip or other flower should be sold for a sum exceeding one hundred and seventy-five dollars." The rage for Dahlias for a few years past, though very great, has not been quite so extravagant as this.

The Umbelliferous family presents a striking uniformity of arrangement. The flower stalks are of such length, and spread out in such a manner as to give the plant the appearance of an umbrella. They have five stamens, the corolla five petalled and minute, and the leaves usually pinnate.

Among the plants of this class used for food are the carrot, parsnep, celery, etc. Umbelliferous plants growing on high ground are highly aromatic and medicinal, as the dill, fennel, caraway, and coriander, while those growing in wet places are among our most deadly poisons.

The *cicuta virosa*, or cowbane,

grows in marshy places, and often proves destructive to cows who feed upon it in the spring, before its fetid odor warns them to avoid it. The poison hemlock (*Cominn maculatum*) has a very unpleasant smell, and a spotted stalk; and like the water parsnep is a violent poison. This is supposed to be the poison which proved so fatal to Socrates. Plants of this description should be avoided, and the rule for determining their nature is very simple and safe.

The Cruciform family is very remarkable in many respects. This has *six stamens, four longer than the other two*; four petals arranged in the form of a cross; the seeds in a pod; the flowers usually white or yellow, rarely ever purple. To this family belong many of our garden vegetables, as the cabbage, turnip, radish, mustard, etc.

Plants of this family are valuable in medicine, being anti-scorbutic in all their varieties. They are *never poisonous*, and on chemical analysis are found to contain sulphur, and are characterized by a biting, pungent taste.

The Labiate family contains a large number of interesting plants, many of them highly medicinal. Every one is familiar with the properties of many of this class, such as the catnip, horehound, pennyroyal, etc.



LABIATE.

This family is distinguished by having *four stamens, two of which are longer than the others*, and a labiate corolla, either personate or ringent. They usually inhabit hillsides and places exposed to the sun; and if highly aromatic their medicinal properties are stimulating; if bitter, they act as a tonic.

There are two divisions of this class; the ringent, which contains the pep-

permint, horehound, lavender, thyme, the cull-cap (said to be a remedy for hydrophobia), the marjoram savory, etc. Plants of this kind usually grow in whorls at the angles of the stem, and are *never* poisonous.



PERSONATE.

The second division includes the *personate* flowers, or those with closed lips. They are much more beautiful than the former division, including the splendid trumpet flower, the foxglove, etc. They differ from the others not only in beauty, but in not being used like many of them in preparing food, for they are generally very poisonous, though some of them possess powerful medicinal properties.

Sir Walter Scott says:

"Foxglove and nightshade, side by side,  
Emblems of punishment and pride"—

thus associating the beautiful foxglove with the deadly and disagreeable nightshade. But it is with plants as with persons: beauty is no symbol of usefulness, and we frequently find the most splendid appearing of both, corrupt and dangerous, and we instinctively turn from them to the more useful flower, or the virtuous individual.

\* [*Aromatic*, sweet scented; having a spicy, fragrant smell, and usually a pungent taste. *Socrates* was one of the greatest of ancient philosophers. He was born at Athens, in Greece, 470 years before Christ, or about 2320 years ago. He was the son of a sculptor, and followed the profession of his father for several years before he commenced the study of philosophy. By *Philosophy*, as used here, is not meant simply "Natural Philosophy," such as is studied in school, but an investigation of the causes of all phenomena, both of mind and matter. Socrates studied to ascertain facts or truth, and the cause of things. He rejected many of the false theories of his times, and finally was accused of despising the heathen gods, and condemned to death by poison. *Pungent*, sharp; bitter; affecting the tongue like small sharp points. *Tonic*, a medicine that increases strength.]

## A SISTER'S VALUE.

**H**AVE you a sister? Then love and cherish her with all that pure and holy friendship which renders a brother so worthy and noble. Learn to appreciate her sweet influence as portrayed in the following words:

"He who has never known a sister's kind administration, nor felt his heart warming beneath her endearing smile and love-beaming eye, has been unfortunate indeed. It is not to be wondered at if the fountains of pure feeling flow in his bosom but sluggishly, or if the gentle emotions of his nature be lost in the sterner attributes of mankind.

"That man has grown up among affectionate sisters,' I once heard a lady of much observation and experience remark.

"And why do you think so,' said I.

"Because of the rich development of all the tender feelings of the heart.'

"A sister's influence is felt even in manhood's riper years; and the heart of him who has grown cold in chilly contact with the world will warm and thrill with pure enjoyment as some accident awakens within him the soft tones, the glad melodies of his sister's voice; and he will turn from purposes which a warped and false philosophy had reasoned into expediency, and even weep for the gentle influences which moved him in his earlier years."

THE cup that is full will hold no more; keep your heart full of good thoughts, that bad ones may not find room to enter.

Politeness is like an air cushion: there may be nothing in it, but it eases our jolts wonderfully.

Science strengthens and enlarges the mind.

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### THE GOOD CHILDREN AND THE SWING.

BY ANSON WILLIAMS.

**C**OME, Ed-win, let us go and take a swing," said Su-san to her broth-er, as they left the tea-ta-ble.

These two chil-dren were always ver-y kind to each oth-er, and both went to the same school.

Ed-win was seven years of age, and Su-san was but six. Ed-win was glad to please his sis-ter, and he said to her, "Yes, Su-san, let us go, I like to swing."

They ran out in the yard, where their pa-pa had built them a swing. Ed-win said, "Sis-ter, you take the seat first, and I will swing you, then I will sit in it while you swing me."

Their lit-tle dog, Ring, ran in the yard with them, and he seemed as hap-py as any one.

He ran and barked as he saw Su-san in the swing, and would try to get hold of the rope.

At length Ed-win took his seat, and as the swing went back and forth, he sang,

"Heigh-ho, here I go,  
High and low."

When they were tired of swing-ing, Ed-win said, "Su-san, I read,

to-day, one of Aunt E-li-za's Sto-ries, which I like ver-y much."

"What was it a-bout, broth-er?"

"Hen-ry Wil-lis, the self-ish boy, and his good lit-tle sis-ter Cla-ra. I like Cla-ra, she was so kind, and good."

"What *was* the sto-ry, Ed-win, I wish you would tell it to me."

"I will read it to you if you will wait for me to get the Stu-dent, for it was in that where I read it."

"O yes, I will wait, and I shall be so glad to hear it, and I love to read those sto-ries for chil-dren, in the Stu-dent, the let-ters are so large and plain."

"Here it is, Su-san, and there is a good sto-ry a-bout the Gold Fish, too, that I will read."

"But read Aunt E-li-za's sto-ry first, Ed-win."

When he had fin-ished read-ing it, Su-san said, "O broth-er, I am so glad that you are not a self-ish boy, I should not be hap-py if you were."

"I do not think I could be hap-



py, ei-ther, were I like Hen-ry Wil-lis, and I shall try to nev-er be-come like him," said Ed-win.

"Here comes pa-pa, let us talk with him now, and I will read to you about the Gold Fish to-mor-row."

#### AUNT ELIZA'S STORIES,—No. IV.

##### THE LOST CHILDREN.

**J**AMES and Henry Merton were picking berries in the woods one day, when they heard a noise near them, which sounded like a cat. They listened; it seemed to go farther into the woods, and they followed after it.

On looking up in a tree they saw nothing but a dark brown bird, but now the noise was in another tree.

"What can it be?" said James. "I thought it might have been this bird, but he did not open his mouth once while we were looking at him," and as James said this the bird made the same noise and flew away.

"O, I know," said Henry, "it is a cat bird, and its mate is calling it. Let us catch them. A cat bird; I wonder if it catches mice."

James laughed, and said, "Perhaps it catches cats too, for you know cats kill birds."

The boys followed the birds

till they forgot it was almost night, and when they turned to go home they could not find their way. The farther they went the more they became confused. Night came on, and little Henry held fast his brother's hand and cried.

Bright flashes of fire gleamed in the woods, and the poor little boy thought them the glaring eyes of some fierce monster, but James told him they were only fireflies dancing about.

At length they laid themselves down by a fallen tree, and fell asleep in each other's arms, their wet cheeks pressed close together, and their last thoughts were of their dear parents and their Heavenly Father.

Their noble dog seated himself by them and looked down as if to say, "Fear not, little boys, I will keep you from harm."

Morning came, and the poor children were hungry; the berries they had picked served for their breakfast, and again they tried to find their way, but the briars tore their flesh, and the large trees prevented them from seeing which way to go, so they had to sit down, fearing all the time they should never see their dear parents again.

At length they found their dog was gone. "Where is Lion?"

they asked, and they called him a long time but he did not come.

Then they both cried till they were almost sick; their berries were gone, they were hungry and thirsty, but they could find no water.

They lay down again, and thought they must die; but just as they had nearly sunk to sleep they heard a loud bark, and with a quick and joyful bound Lion came to their side, then ran off again, then back, dancing and capering about as if wild with delight.

They raised their heads, and with a cry of joy their father and mother sprang forward and caught their darling children in their arms.

The boys had been told they might stay at their aunt's the night before, and their parents thought they were there, till Lion came home in the morning acting very strangely.

He ran, barked, and whined, caught Mrs. Merton by her dress, and tried to pull her toward the woods.

On finding the boys had not been to their aunt's, the parents knew the poor children were lost, and following the faithful dog they soon found their dear little boys.

You may be sure the boys

loved Lion dearly after this, for had it not been for this noble dog, they might have perished in the woods.

### MARY MAY.

DEAR Annie, did you ever hear  
About sweet Mary May?  
She hung her satchel on her arm,  
And tripped to school each day.

She beat the sun, for she got up  
When first the robin sang,  
And knew her lessons very well  
Before the school-bell rang.

The teacher smiled to see her come,  
With face so bright and gay,  
And all the scholars dearly loved  
The loving Mary May.

And then, they said, she played at noons  
The very best of all,  
At "jump the rope," and "hide and whoop,"  
And "prisoner's base," and "ball."

She would not cheat at any game,  
Though she were seen by none;  
Nor would she pout and quit the play,  
Nor scold at any one.

Now Susan Sand went to that school  
And lonely seemed all day,  
Her clothes were coarse, and no one asked  
The friendless girl to play.

When Mary saw her look so sad,  
And lean against the tree,  
She went to her and kindly said,  
"Do come and play with me!"

The scholars stared while Mary led  
Poor Susan by the hand;  
They said "'tis queer that Mary May  
Will go with Susan Sand!"

But Mary stay'd by Susan's side,  
And played with her each day:  
At last the children said "'tis right  
To do like Mary May."

And so they played with Susan, too,  
 And were a happy band  
 When, like sweet Mary May, they all  
 Were kind to Susan Sand.

The same great Father made each one,  
 Though some are poor and small,  
 And if our hearts are good and kind,  
 We, too, will love them all.

*From "Cousin Ann's Stories."*



### THE BIRD'S NEST.

**A**LFRED, come here and see  
 what I have found! Here  
 is a little bird's nest with  
 five eggs in it."

"O, Eugene! what a pretty  
 nest, it is built so snugly in such a  
 sly place! And what pretty little  
 white eggs! Let us take them  
 home and show them to sister  
 Amelia, and mamma."

"No, no, Alfred, that would be  
 wrong. You know mamma has  
 often told us how cruel it was to  
 rob a bird's nest."

"Yes, but I would not rob it,  
 I would only take home the nest  
 with the eggs in it for mamma  
 and sister to look at, then bring  
 them back again."

"But that would be cruel.  
 While you were away the old

bird would come back and find  
 her nest had been removed, and  
 then might fly away in distress  
 at her loss."

"Would she not come back  
 again, Eugene, and be happy to  
 find her nest returned to its place  
 without harm?"

"She might not do so, Alfred.  
 Some birds will forsake their  
 nests and never return to them  
 again, when they find that they  
 have been discovered."

"I should be quite sorry to  
 have this bird's nest forsaken, or  
 to give the bird distress."

"Then, Alfred, you should not  
 disturb it at all. The old bird  
 may have begun to set on her  
 eggs, and if they should be al-  
 lowed to become too cold it  
 would destroy the young birds."

"Well, Eugene, I am glad you  
 have said so much to me about  
 the cruelty of robbing a bird's  
 nest, and I will try to remember  
 it, and never do so wrong a  
 deed."

"Alfred, I love the little birds  
 best, that come around our houses  
 and build their nests near us.  
 They seem to like to be near, as  
 if to ask our protection."

"I am quite happy to hear you  
 talk thus, Eugene, for I am sure  
 you could not harm the innocent  
 birds when you love them so."

"A few days since I learned

some pretty verses, written by Mrs. L. M. Child; and I think I shall always remember them when I see a bird's nest, or hear that a little boy has robbed one.

"Now listen to me, Alfred, while I repeat them:

WHO STOLE THE BIRD'S NEST?

"To-whit! to-whit! to-whee!  
Will you listen to me?  
Who stole four eggs I laid,  
And the nice nest I made?"

"Bob-a-link! Bob-a-link!  
Now what do you think?  
Who stole my nest away  
From the plum-tree to-day?"

"Not I," said the cow; "moo-oo!  
Such a thing I never would do.  
I gave you a wisp of hay,  
But I did not take your nest away."

"Not I," said the dog; "bow-wow!  
I would not be so mean, I vow!  
I gave the hairs the nest to make,  
But the nest I did not take."

"Not I," said the sheep, "O no!  
I would not treat a poor bird so.  
I gave the wool, the nest to line,  
But the nest was none of mine."

"Caw! caw!" cried the crow;  
"I should very much like to know  
What thief stole away  
A bird's nest to-day."

"Cluck! cluck!" said the hen;  
"Do not ask me again.  
Why, I have not a chick  
That would do such a trick."

"We all gave her a feather,  
And she wove them together.  
I would scorn to intrude  
On her and her brood.  
Cluck! cluck!" said the hen;  
"Do not ask me again."

"Chirr-a-whirr! chirr-a-whirr!  
We will make a great stir.  
Let us find out his name,  
And all cry, 'For shame!'"

"I would not rob a bird,"  
Said little Mary Green.  
"I think I never heard  
Of any thing so mean."

"It is very cruel, too,"  
Said little Alice Neal.  
"I wonder if he knew  
How bad the bird would feel."

A little boy hung down his head,  
And went and hid behind the bed;  
For he stole that pretty nest  
From the poor little yellow-breast;  
And he felt so full of shame,  
He did not like to tell his name.

THE LITTLE MOUSE.

ONE day as Julia Gray sat in her room, quietly studying her lesson, she saw a little mouse peep out of his hole, and then run along the floor.

She spoke to the little fellow, but he did not seem inclined to listen, for he ran to his hiding place as soon as he heard her voice. Here is what she said to him:

"Little mouse, little mouse! where are you running to? O, you need not scamper away so fast, I do not wish to catch you.

"Ah! that is your hole, is it? Very well—I shall know where to watch for you now. What, you are peeping out again, are you?"

"I see a little piece of cheese on the floor; that is what you are looking for I suppose."

## Phonography.—Lesson 4.

THE improper diphthongs are divided into two series, called the W and Y series. These are produced by prefixing the sounds of *w* and *y* to each of the simple vowels, and allowing them to coalesce, as in the words *we, way; ye, yea*, etc. The W series is represented by a small perpendicular semi-circle. The Y series is represented by the same character placed in a horizontal position.

Each of the improper diphthongs has three positions, which correspond to the positions of the vowels. Most of these diphthongs occur in the English language, both long and short. The long ones are represented by heavy marks, and the short ones by light marks: as **W** *wooded*;

**w** *wood*; **y** *yawn*; **y** *yon*.

### IMPROPER DIPHTHONGS

#### W SERIES

LONG.	SHORT.
We <b>e</b> <i>weak.</i>	Wi <b>i</b> <i>wh.</i>
Wa <b>a</b> <i>wake.</i>	Wā <b>a</b> <i>wa.</i>
Wah <b>h</b> <i>quah.</i>	Wā <b>h</b> <i>wag.</i>
Wau <b>u</b> <i>wall.</i>	Wō <b>u</b> <i>wot.</i>
Wo <b>o</b> <i>woks.</i>	Wū <b>o</b> <i>won.</i>
Woo <b>o</b> <i>woo.</i>	Wōō <b>o</b> <i>wood.</i>

#### Y SERIES.

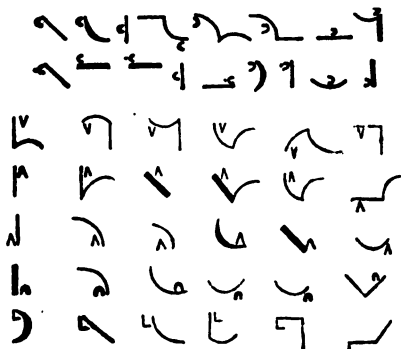
LONG.	SHORT.
Ye <b>e</b> <i>ye.</i>	Yi <b>i</b> <i>—</i>
Ya <b>a</b> <i>yea.</i>	Yā <b>a</b> <i>yet.</i>
Yah <b>h</b> <i>yarn.</i>	Yā <b>h</b> <i>yam.</i>
Yau <b>u</b> <i>yawn.</i>	Yō <b>u</b> <i>yon.</i>
Yo <b>o</b> <i>yoke.</i>	Yū <b>o</b> <i>young.</i>
Yoo <b>o</b> <i>you.</i>	—

The two triphthongs, *wi* and *wou*, are represented by the following characters: **wi** **i** as in *wine*; **wou**, **u** as in *wound*.

The characters representing the diphthongs and

the triphthongs always retain the positions they occupy in the preceding tables; and never accommodate themselves to the inclination of the consonants to which they are placed, as the dashes do, which represent the simple vowels.

#### EXERCISE CONTAINING DIPHTHONGS, AND TRIPHTHONGS.



#### Words contained in the preceding exercise

1st line—weep, wave, wait, quaff, warm, work, woke, wound.

2d line—whip, wig, whig, wet, whack, was, what, wen, wood.

6th line—dew, your, few, new, new, pure.

7th line—wise, wipe, wife, twine, quite, quire.

The student should now write the following words and sentences several times, in phonography. This will form a sort of a review of the preceding lessons:

Idea, Ohio, Harry, happy, icy, honey, alley, above, among, habit, bonnet, attend, fairly, faulty, king, devoid, game, thank, key, bay, cow, rye, boy, oil, owl, egg, hook, shoe, pie, hoop, hail, head, hill, hope, hoof, sigh, show, half, pay, right, say, rack, our, thou, hat, thaw, may.

Show no haughty air. Hope, thy ray may heal me. Pay here thy vow. They are so happy now, though they have no home.

Form no bad habit in boyhood, it may affect thy health, thy hope, in age. Hate may be bought cheaply; take care that thou make thy pay in love.

Wrath may terrify, although it have no power. Charity tarrieth long; appeareth wholly lovely among us. Admire theory; love fact.

## Drawing Department.



*Lily.*

DURING the past month we have received some very good leaf impressions. Among them were several sheets from the pupils of Mr. Horace Warner, of Branchville, N. J. These were made on white tissue paper, which enabled them to send several sheets in one letter without increasing the postage, but the impressions do not show quite as well as on thicker paper. We are happy to learn that Mr. Warner's pupils issue their Leaf Register weekly.

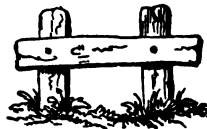
He says, "We intend to send you a few copies monthly, to attest to you that your generous and animating suggestions meet a cordial response from the forest-crowned mountains of Sussex."

The pupils of the Branchville Academy, taught by Mr. M. C. Sibbet, have also favored us with a package of leaf impressions, executed in their usual good style. These impressions are green, and we believe they are taken by using water paint instead of ink. Those sent us do not show all of the veins of the leaf as neatly delineated as when properly taken by the use of printing ink; but we see no reason why the impression may not be as well taken by such means as by the use of ink or smoked paper. It will require considerable care to mix the paint to a proper consistency, and to apply it evenly—probably a soft leather ball stuffed with cotton, the same as used with ink, will be found to be the best mode of applying the paint.

The pupils of Mrs. C. C. Homan, of Washington Corner, Morris county, N. J., have sent us a package of drawings. These are the first from that school, but we hope to receive many more. Names of pupils who executed the drawings: Martha J. Renick, aged twelve; Sarah J. Thompson, fifteen; Ruhama C. Thompson, fourteen; Rebecca Goorhees, twelve; Mary A. Woodruff, ten; Anna M. Day, fifteen; E. McMurtry, fifteen;



*Padlock.*



Mary E. Siddel, thirteen; Sarah M. Leighton, twelve; Augusta Denton, eleven; A. E. Vauces. Pretty good beginning—try again.

We have recently received another package of drawings and leaf impressions from the pupils of Miss Eliza A. Chase, Orangetown, N. Y. The drawings were good, but the leaf impressions are first attempts, consequently not as neatly executed as we expect to receive from them as soon as they have had a few days of practice in using the ink. Try again, and do not use quite so much ink. Apply the ink with a soft leather ball, and spread over the leaf, when laid on the paper upon which the impression is to be made, a piece of cotton wadding, and then pass a roller once over it, pressing firmly upon it. Names of the pupils who sent these specimens: Maria T. Demarest, aged fifteen; Matilda Cooper, eleven; Ellen J. Blauvelt, twelve; Martha Crum, eight; Mary E. Cooper, seven; Mary Van Houten, six; James Van Derbelt, fourteen; William Van Houten, twelve; Cornelius J. Blauvelt, twelve; John L. Blauvelt, nine.

From the pupils of Mr. M. L. Snyder's school, Branchville, N. J., a package of drawings and leaf impressions were received last month, but they came to hand too late for the July number. Names of the pupils: Hannah A. Hunt, aged twelve; Mary McDonalds, fourteen; Margaret Williams, eleven; Theodosia Depue, ten; Emily Depue, thirteen; Francis Depue; Ann Augusta Beach, twelve; Jane McDonalds, twelve; Arminda Morris; Sarah Williams; Ann Drake; John McDonalds; Alfred A. Ackerson; Wm. M. Everitt; Joseph McDonalds; Mary Billings.

We shall be pleased to receive those leaf impressions from your printing-press, and will gladly exchange with you. Thank you, friend Snyder, for your word of encouragement. Editors,

as well as teachers, feel a satisfaction in knowing that their labors are appreciated. "A better acquaintance with *The Student* but increases our love for it. I never had such success in teaching reading with any other work, as with this. I think all are pleased with the change in the present volume."

We welcomed that sheet of leaf impressions from E. L. Pollard, of Henniker, N. H., and shall be happy to receive many more of the same kind from the Granite State.

### Editor's Table.

**TO TEACHERS.**—Those of you who have introduced *The Student* into your schools as a reading book, have undoubtedly found some articles in it which require more than one reading. This is as we intend. There are subjects which should be treated upon in a work of the character of this, which require more than even a careful perusal. To this class belong the articles under the head of Science, the Coats of Arms, Lessons in Botany, and particularly in Phonography. Each of these may profitably be made the subject of study, and the teacher should spend considerable time in asking questions concerning them, as well as explaining such queries as naturally arise from an investigation of these subjects.

In connection with Botany, that of leaf printing, as described in the Drawing Department of the June number, should receive due attention, as it will add much interest to the subject, and furnish a mode for the pupils to spend their time very profitably, while they will be much interested. As much botanical information should be connected with the practice of taking leaf impressions as possible, for it is that which gives it importance. Let the pupil not only write the name of the plant to which the leaf belongs, but also the name of the family in which it is classed. And if to this be added the name of the leaf, from its shape—as whether ovate, palmate, cordate, lanceolate, etc.—it will but enhance the value of these leaf prints.

The lessons in Phonography, may be explained to a class from a blackboard. And as an important step, not only in learning Phonography, but in learning the elementary principles of the English language, is that of being able to give singly the true sounds of the vowels and consonants as they are heard in words, it should be the practice of every teacher to spend a few minutes each day, at least, until all are perfectly familiar

with them, in requiring all the pupils to utter these sounds, first in concert and afterward in union. For a more minute explanation of the process of the exercise here alluded to, please examine the last two paragraphs on the subject of reading, found on the last page of our June number. The value of such an exercise to the voice and articulation, in training the organs of speech, and acquiring a correct and elegant pronunciation, can hardly be over-estimated.

**NOTICE TO NEW SUBSCRIBERS.**—Owing to the rapidly increasing circulation of *THE STUDENT*, our first and second editions have been exhausted, but the work is stereotyped, and a **THIRD EDITION** is now on the press, and will be ready in a few days, when all new subscribers will be furnished with the back numbers. This will explain the cause of our sending the August number to those who have just subscribed, before they receive the first numbers of the volume.

**THE NEW-YORK STATE TEACHERS' ASSOCIATION** will hold its fifth annual meeting in the city of New York, on Wednesday and Thursday, the 7th and 8th inst. A committee of arrangements will be in attendance at the Western Hotel, in Cortland street, who will receive and introduce delegates who are strangers in the city.

**THE ILLUSTRATED DOMESTIC BIBLE**—by the Rev. Ingram Cobbin, M. A., is published by Samuel Hueston, 139 Nassau street, New York.

We have received the first two numbers of the above work, and are happy to find that it more than meets our expectation on seeing the advertisement. It is issued in parts, on the 1st and 15th of each month, in a convenient quarto form, with plain type, on good paper, and is well illustrated. This work combines a large amount of useful information, in the form of references, notes, reflections, marginal readings, and improved readings, etc. The illustrations are not only ornamental, but serve to illustrate manners, customs, and places of the people and countries spoken of in the Bible. The whole work will be completed in twenty-five numbers, at twenty-five cents each. See advertisement on cover.

**THE AMERICAN RAILWAY GUIDE** is an excellent *pocket companion* for the traveler in any part of the United States. It gives the time of starting from all stations, distances, fares, etc., on all the railroads in the United States. Corrected and published on the 1st of each month, by Curran Dinsmore, 138 Fulton street, New York. Price 12½ cents.

**THE AMERICAN CABINET AND BOSTON ATHEŒUM** has recently commenced its fifth volume, and bids fair to serve its readers with still richer intellectual repasts. This is one of the few choice papers which we preserve on file as worthy of binding and a second reading. It is published weekly, in a double quarto form, by Henry Mason, 128 Washington street, Boston. Terms \$2 per annum, in advance.

## THE YELLOW BIRD.

POETRY BY REV. C. H. A. BULKLEY—MUSIC BY PROF. P. A. ANDREU.

*Allegretto.*

Pret - ty lit - tle Yel - low - bird! How he sings a - loft,  
Sweet - est notes I ev - er heard, Ten - der - ly and soft.  
Peck - ing at the cher - ry bright, Reddening all his bill,  
Hop - ping round with step so light, Sweet - ly sing - ing still.

## II.

Pretty little Yellow-bird!  
Now he trims his wings;  
From each feather well upstirred,  
All the dew he flings.  
See his shining, golden breast,  
Like a ray of morn,  
Glittering through the leafy nest,  
Where his brood was born.

## III.

There, away, how swift he flies!  
With his tiny wings;  
Hasting, while the Summer dies,  
Toward the southern springs.

Happy bird in every land!  
He who feedeth thee,  
With his overflowing hand,  
Also feedeth me.

## IV.

Pretty little thing of air!  
Like thee let me live  
On His love who will in care,  
Good things to me give.  
When my summer's life is o'er,  
I would fly away,  
Far where on some fairer shore,  
Shines a brighter day.



## CONDUCTING RECITATIONS.

THE following excellent remarks on conducting recitations we copy from the Massachusetts Teacher :

The recitation is the best test of the teacher as well as of the scholar. If a teacher possesses ability, here is the place where it is exhibited, for it is the grand theater of his operations. The principal means of improvement in this respect are found in conversation with those of greater experience, in reading, in observation, and in judicious experiments. But as skill in conducting recitations involves many of the requisites of a good teacher, it must not be imagined that it is a thing to be attained by an off-hand effort, or by following any set of rules.

It is not the hasty product of a day,  
But the well ripened fruit of age delay.

In this article we aim at nothing more than to drop a few hints which may be useful to beginners, and to answer, though imperfectly, that question which they are apt to ask themselves as they stand before their classes—*How shall I proceed in order to render this exercise as pleasant and profitable as possible?*

As a preliminary step in attempting to reach this result, it is important to give pupils definite and particular directions as to the manner of preparing their lessons, and the manner in which they will be expected to recite. The difficulties they will be likely to meet should be anticipated, and though not solved and cleared up, such hints should be thrown out as the case may require.

Attention is the most important thing now to be required of the pupils; undivided attention, the attention of the whole class as long as the recitation continues. I put an important question to one of my pupils a few days since, which he could not answer, and pleaded in excuse, with eyes filled with tears, that it was not in the book, and he had never heard it before. But the fact was that it had been discussed and answered in his presence on the day previous, while he was inattentive, and so he was none the wiser for what had been said about it. Instruction is wasted on minds while in such a state. It is seed sown by the wayside. Attention is a fundamental requisite of a good recitation, and must be secured at any cost, for without it the best of instruction can neither be understood nor retained. The teacher should leave no expedient untried till he has succeeded here, for it is idle to attempt other conquests, while this victory remains to be achieved. The attention of young scholars is soon wearied, and it is very injudicious to drag their jaded minds through long recitations. Their mental repasts should be short and sweet. They will come to them then with a sharp appetite, though often called. There are two kinds of attention: that which is caused by an interest in the subject under consideration, and that which is yielded from a sense of duty, or under the pressure of necessity. The former should be aimed at when it is desirable to deposit knowledge in the memory safely. The latter is useful as a mental discipline. When the Athenian orator was asked what was the most important thing in speaking, he replied, *action*; the second requisite, *action*; the third, *action*. And I would say the same of attention in recitation.

Energy is another essential requisite in a good recitation. It should enter into every action, however minute

and trivial. In rising up and in sitting down, in the posture of the body, and holding the book, it should be constantly insisted upon. Indistinct utterance is not unfrequently the result of a slothful habit of using the organs of speech, especially the tongue and lips. In such cases energy is the only remedy. The organs of the body, as well as the faculties of the mind, should be trained to prompt and vigorous action in every exercise in the recitation where it is possible.

Energy should be well tempered with the attractive grace of gentleness. It may be useful also to bear in mind, that there is a marked difference between energy and noise—a difference similar to that between lightning and thunder. The literal meaning of energy is *is-ward-workingness*, and where it really exists, it will make itself felt, though speaking in a "still small voice."

The example of the teacher is the best mode of securing energetic habits in pupils. Energy is contagious. Let the teacher be active, brisk, and decisive in his manner, and the same qualities will be reflected in his pupils. On the other hand, who ever found a class any thing but tame and listless in the hands of a teacher eminent for sluggishness and inactivity? There is no better rule on this subject than that in the holy proverb, "Whatever our hand finds to do, let us do it with all our might."

Encouragement, when judiciously applied, is a powerful agent in promoting the objects of recitation. It is what scholars of all grades need. Children must have it, or they will not succeed. Encouragement in education is like the sun in the natural world; nothing can supply its place. The teacher who knows how to dispense his smiles of approbation, wields a greater power than ever slept in the rod, or was contained in the language of censure and reproach. Make a pupil think he can do a thing, and he can do it. This is a consideration which requires particular attention, as teachers are constantly prone to bestow the largest share of encouragement where it is least needed. How much more are the bright and bold scholars praised, and cheered on, than the dull and timid!

Exactness is a quality which should be rigorously demanded in recitation. There can be no such thing as good scholarship or good instruction without it. In pronunciation, it is not enough to avoid inaccuracies; the utterance should be complete in every respect, and free from all defects. Fragments of sentences, and incoherent phrases, should not be received as answers to questions. It fosters a slovenly habit of expression, and robs the pupil of the best practical means of acquiring readiness and correctness in the use of language.

In every recitation it should be the aim of the teacher to call into exercise as many faculties as possible; for it is only by exercising them that they can be developed and perfected. When it is possible, principles should be deduced from the particular facts under consideration, the pupils made to see how much more valuable the knowledge of one general truth is, than the knowledge of many facts. Every sort of routine in recitation should be avoided. The teacher who would be very successful must tax his invention to find out ways of varying the exercises, though always keeping the great end in view

# THE STUDENT.

## THE ADVANTAGES OF INDUSTRY.

BY HENRY WARD BEECHER.

INDUSTRY promotes happiness. Some men of the greatest industry are unhappy from infelicity of disposition; they are morose, or suspicious, or envious. Such qualities make happiness impossible under any circumstances. Health is the platform on which all happiness must be built. Good appetite, good digestion, and good sleep are the elements of health, and industry confers them.

Buoyant spirits are an element of happiness, and activity produces them; but they fly away from sluggishness, as fixed air from open wine. Men's spirits are like water, which sparkles when it runs, but stagnates in still pools, and is mantled with green, and breeds corruption and filth.

The poor man, with industry, is happier than the rich man in idleness; for labor makes the one more manly, and riches unmanly the other. Let those who envy the gay revels of the city idlers experience for a week the lassitude of their satiety, the unarousable torpor of their life when not under a fiery stimulus, their desperate *ennui*, and restless somnolency, they would gladly flee from their haunts as from a land of cursed enchantment.

Industry is the parent of thrift. In the overburdened states of Europe, the severest toil often only suffices to make life a wretched vacillation between food and famine; but in America, industry is prosperity.

Although God has stored the world with an endless variety of riches for man's wants, He has made them all accessible only to industry. The food we eat, the raiment which covers us, the house which protects, must be secured by diligence. To tempt man yet more to industry, every product of the earth has a susceptibility of improvement; so that man not only obtains the gifts of nature at the price of

labor, but these gifts become more precious as we bestow upon them greater skill and cultivation.

The wheat and maize which crown our ample fields, were food fit but for birds, before man perfected them by labor. The fruits of the forest and the hedge, scarcely tempting the extremest hunger, after skill has dealt with them, and transplanted them to the orchard and the garden, allure every sense with the richest colors, odors, and flavors. The world is full of germs which man is set to develop; and there is scarcely an assignable limit to which the hand of skill and labor may not bear the powers of nature.

Industry gives character and credit to the young. The reputable portions of society have maxims of prudence, by which the young are judged and admitted to their good opinion. *Does he regard his word? Is he industrious? Is he economical? Is he free from immoral habits?* The answer which a young man's conduct gives to these questions, settles his reception among good men. Experience has shown that the other good qualities of veracity, frugality, and modesty are apt to be associated with industry.

Industry is a substitute for genius. Where one or more faculties exist in the highest state of development and activity as the faculty of music in Mozart, invention in Fulton, ideality in Milton, we call their possessor a genius. But a genius is *usually* understood to be a creature of such rare facility of mind, that he can do any thing without labor.

According to the popular notion, he learns without study, and knows without learning. He is eloquent without preparation, exact without calculation, and profound without reflection. While ordinary men toil for knowledge by reading, by

comparison, and by minute research, a genius is supposed to receive it as the mind receives dreams. Such minds *may* exist.

So far as my observations have ascertained, they abound in academies and colleges, and Thespian societies; in village debating clubs; in coteries of young artists; and among young professional aspirants. They are to be known by a reserved air, excessive sensitiveness, and utter indolence; by being very conceited, very affected, very disagreeable, and very useless—beings whom no man wants for friend, pupil, or companion.

The occupations of the great man, and of the common man, are necessarily, for the most part, the same; for the business of life is made up of minute affairs, requiring only judgment and diligence. A high order of intellect is required for the discovery and defense of truth; but this is an unfrequent task. The vast bulk of men are required to discharge the homely duties of life; and they have less need of genius than of intellectual industry and patient enterprise.

Young men should observe that those who take the honors and emoluments of mechanical crafts, of commerce, and of professional life, are rather distinguished for a sound judgment, and a close application, than for a brilliant genius. In the ordinary business of life, industry can do any thing which genius can do, and very many things which it can not.

Genius is usually impatient of application, irritable, scornful of men's dullness, squeamish of petty disgusts. It loves a conspicuous place, a short work, and a large reward. It loathes the sweat of toil, the vexations of life, and the dull burden of care.

Industry has a firmer muscle, is less annoyed by delays and repulses, and, like water, bends itself to the shape of the soil over which it flows; and if checked, will not rest, but accumulates, and mines a passage beneath, or seeks a side-race, or rises above and overflows the obstruction.

What genius performs at one impulse, industry gains by a succession of blows. In ordinary matters they differ only in rapidity of execution, and are upon one

level before men who see the *result* but not the *process*.

It is admirable to know that those things which, in skill, in art, and in learning, the world has been unwilling to let die, have not only been the conceptions of genius but the products of toil. The masterpieces of antiquity, as well in literature as in art, are known to have received their extreme finish from an almost incredible continuance of labor upon them.

I do not remember a book in all the departments of learning, nor a scrap of literature, nor a work in all the schools of art, from which its author has derived a permanent renown, that is not known to have been long and patiently elaborated.

Genius needs industry as much as industry needs genius. If only Milton's imagination could have conceived his visions, his consummate industry only could have earned the immortal lines which enshrine them. If only Newton's mind could reach out to the secrets of nature, even his could only do it by the homeliest toil.

The works of Bacon are not midsummer-night dreams, but, like coral islands, they have risen from the depths of truth, and formed their broad surface above the ocean by the minutest accretions of persevering labor. The conceptions of Michael Angelo would have perished like a night's phantasy, had not his industry given them permanence.

[*En-moi* (on-we'), dullness of spirits; uneasiness, with a feeling of disgust. *Som'-no-lency*, drowsiness; inclination to sleep. *Mo-zart* was one of the greatest of modern composers of music. He was the son of an able musician, and born at Salzburg, in Austria, in 1756. He began to display his musical talents when he was only three years of age, and at the age of six he was listened to as a prodigy. At the age of ten he commenced the study of composition of music. He died in 1792. *Fulton*—Robert Fulton, was born at Little Britain, Pennsylvania, in 1765. He was the first person who successfully applied the steam-engine to navigation. His first steamboat was built at New York, in 1807, and named the North River. Fulton died in 1815. *Milton* was born in London, in 1608. He was a celebrated poet. 'His Paradise Lost, which was first published in 1667, immortalized his name. His publisher paid him only five pounds for the first edition of 1300 copies, and agreed to pay him two more when two more editions of 1300 copies each had been sold. Milton died in 1674.]

## MY TEACHER'S GRAVE.

BY L. M. WILES.

WAS morn! proud rose the rich autumnal sun,  
 er rip'ning harvest fields and forests dun;  
 round the hills, in massive grandeur, rolled  
 right orient clouds, tinged deep in scarlet gold.  
 's dappling now the distant somber sky,  
 's new warm, and melted from the ling'ring eye.  
 's ow rising, high above the dingle's green;  
 's the early smoke enharmonized the scene.  
 's the bird of autumn sung his plaintive lay  
 's'er mount and mead, to usher in the day;  
 's while softly gushing through the wood, yet still,  
 's heard the meek-toned whimper of the rill.  
 's the harvester, as now he turned his way,  
 's with amorous song began to cheer the day.

's was beautiful, though sad—the passing year,  
 's with all its gladdened charms, looked pale and  
 sear.

's and musing, forth I took my pensive way,  
 's ar up the heath, to view th' advancing day.  
 's s'er the smitten leaf I breathed a sigh,  
 's the rustic graveyard caught my wand'ring eye.  
 's thither o'er neglected mounds then trod,  
 's and scanned the names who tenanted the sod;  
 's 'at pausing now, beneath an alder's shade,  
 's saw the grave wherein my teacher laid.  
 's occluded is the nook, and though 'tis wild,  
 's obscure, and overgrown with brakes, it smiled  
 's to greet my passing gaze.

I lingered long  
 beside that sunken mound—the farewell song  
 's of birds of passage touched my pensive soul.  
 's s'er sad mem'ry thus reflection stole:  
 's and spirit of another clime, whose clay  
 's lies silent 'neath this lone neglected way  
 's how remembrance, with her smiles and tears,  
 's calls up thy presence from departed years!  
 's see thee in that rustic, time-browned cot,  
 's 'Thou very seat long since has been forgot,  
 's with that paternal smile which e'er thou wore,  
 's s oft I entered at the morning door.

's low oft at noon, ere I the green did gain,  
 's 've heard thee drum the signal window pane;  
 's and hardly conscious that an hour had sped,  
 's full of vigor, to her presence sped.  
 's and then, when tasked till patience worn away,  
 's when every hour seemed length'ning to a day,  
 's met the kindly caution, to learn well  
 's the lesson which so soon was mine to spell—

Then, when the failing word by me would pass,  
 And grieved, I lost my standing in the class,  
 How sad, and yet how kindly, thou didst say,  
 "I would the better do another day."

How oft, when passion in my bosom rose,  
 Fired up by all my trifling world of woes—  
 When on some luckless mate the missile fell,  
 That made his bitter cries my teacher tell,  
 How soon thou whispered kindness in these ears,  
 And made my passion melt itself to tears.

I do remember well the fatal day  
 When her sweet spirit took its flight away!  
 I saw her when she'd made the morning prayer,  
 With trembling agitation take her chair.  
 There was a bleaching paleness o'er her brow,  
 That makes me chill to think I see it now;  
 We saw her struggle—and she dropp'd her head—  
 We rushed to speak to her—but, *she was dead!*

I saw the dark and lengthened funeral train  
 In sadness move along yon distant plain  
 Till gathering soon around this hallowed ground,  
 They laid her low beneath this hidden mound.  
 Long years have passed since that eventful day;  
 Long years hast slumbered here her peaceful  
 clay;  
 Since then, stern life, with all its worlds of care,  
 Has thinned the face that then was flush and fair;  
 Since then, alas! how often have I thought  
 Of all the world of precepts that she taught.

## LIVE LIKE A MAN.

BY S. M. HOBBS.

LIVE like a man, stern and upright,  
 Noble, brave, and true;  
 Act out the great that's in thee,  
 Dare to think, to be, to do.

Put strength and vigor in thy arm,  
 And courage in thy heart;  
 Go forth to glory and to duty,  
 Proudly act thy part.

In the stirring struggles round thee,  
 Be a hero and a man;  
 Stem the torrent, boldly  
 Battling for thy clan.

What if ills, and clouds, and sorrow  
 Meet thee in thy way,  
 Faint not, nor flinch, nor falter,  
 But triumph o'er dismay.



PORTRAIT OF JENNY LIND.

## JENNY LIND.

BY FREDERIKA BREMER.

**T**HERE WAS once a poor and plain little girl, dwelling in a little room, in Stockholm, the capital of Sweden. She was a poor little girl indeed then; she was lonely and neglected, and would have been very unhappy, deprived of the kindness and care so necessary to a child, if it had not been for a peculiar gift. The little girl had a fine voice, and in her loneliness, in trouble or in sorrow, she consoled herself by singing. In fact, she sung to all she did; at her work, at her play, running or resting, she always sung.

The woman who had her in care went out to work during the day, and used to lock in the little girl, who had nothing to enliven her solitude but the company of a cat. The little girl played with her cat and sang. Once she sat by the open window and stroked her cat and—sang, when a lady passed by. She heard the voice, and looked up and saw the little singer. She asked the child several questions, and went away.

Several days later she came back, followed by an old music-master whose name was Croelius. He tried the little girl's musical ear and voice, and was astonished. He took her to the director of the Royal Opera of Stockholm, then a Count Puhe, whose truly generous and kind heart was concealed by a rough speech and a morbid temper. Croelius introduced his little pupil to the count, and asked him to engage her as "élève" for the opera. "You ask a foolish thing!" said the count gruffly, looking disdainfully down on the poor little girl. "What shall we do with that ugly thing? See what feet she has! And then her face! She will never be presentable. No, we can not take her. Away with her!"

The music-master insisted, almost indignantly. "Well," exclaimed he at last, "if you will not take her, poor as I am, I will take her myself, and have her educated for the scene; such another ear as she has for music is not to be found in the world!"

The count relented. The little girl was

at last admitted into the school for élèves at the opera, and with some difficulty a simple gown of black bombasin was procured for her. The care of her musical education was left to an able master, Mr. Albert Brog, director of the song-school of the opera.

Some years later, at a comedy given by the élèves of the theater, several persons were struck by the spirit and life with which a very young élève acted the part of a beggar girl in the play. Lovers of genial nature were charmed, pedants almost frightened. It was our poor little girl, who had made her first appearance, now about fourteen years of age, frolicsome and full of fun as a child.

A few years still later, a young debutante was to sing for the first time before the public in Weber's *Freischütz*. At the rehearsal preceding the representation of the evening, she sang in a manner which made the members of the orchestra once, as by common accord, lay down their instruments to clap their hands in rapturous applause. It was our poor, plain little girl here again, who now had grown up and was to appear before the public in the character of Agatha.

I saw her at the evening representation. She was then in the prime of youth, fresh, bright, and serene as a morning in May, perfect in form, her hands and arms peculiarly graceful, and lovely in her whole appearance, through the expression of her countenance, and the noble simplicity and calmness of her manners. In fact she was charming. We saw not an actress, but a young girl full of natural geniality and grace. She seemed to move, speak, and sing without effort or art. All was nature and harmony.

Her song was distinguished especially by its purity, and the power of soul which seemed to swell in her tones. Her "mezzo voce" was delightful. In the night scene where Agatha, seeing her lover come, breathes out her joy in a rapturous song, our young singer, on turning from the window, at the back of the theater to the

spectators again, was pale for joy. And in that pale joyousness she sang with a burst of outflowing love and life that called forth not the mirth but the tears of the auditors.

From that time she was the declared favorite of the Swedish public, whose musical taste and knowledge are said to be surpassed nowhere. And year after year she continued so, though after a time, her voice, being overstrained, lost somewhat of its freshness, and the public, being satiated, no more crowded the house when she was singing. Still, at that time, she could be heard singing and playing more delightfully than ever in Pamina (in Zauberröte), or in Anna Bolena, though the opera was almost deserted. It was then late in the spring, and the beautiful weather called the people out to nature's plays. She evidently sang for the pleasure of song.

By that time she went to take lessons of Garcia, in Paris, and so give the finishing touch to her musical education. There she acquired that warble in which she is said to have been equaled by no singer, and which could be compared only to that of the soaring and warbling lark, if the lark had a soul.

And then the young girl went abroad and sang on foreign shores and to foreign people. She charmed Denmark, she charmed Germany, she charmed England. She was caressed and courted everywhere, even to adulation. At the courts of kings, at the houses of the great and noble, she was feasted as one of the grandes of nature and art. She was covered with laurels and jewels. But friends wrote of her, "In the midst of these splendors she only thinks of her Sweden, and yearns for her friends and her people."

One dusky October night, crowds of people, the most part, by their dress, seeming to belong to the upper classes of society, thronged on the shore of the Baltic-harbor at Stockholm. All looked toward the sea. There was a rumor of expectance and pleasure. Hours passed away and the crowds still gathered, and waited, and looked out eagerly toward the sea. At length a brilliant rocket rose joyfully, far out at the entrance of the harbor and was greeted by a general buzz on the shore.

"There she comes! there she is!" A large steamer now came thundering on, making its triumphant way through the flocks of ships and boats lying in the harbor, toward the shore of the "Skeppsbro." Flashing rockets marked its way in the dark as it advanced. The crowds on the shore pressed forward as if to meet it.

Now the leviathan of the waters was heard thundering nearer and nearer; now it relented, now again pushed on, foaming and splashing, now it lay still. And there, on the front of the deck, was seen, by the light of lamps and rockets, a pale, graceful young woman, her eyes brilliant with tears, and lips radiant with smiles, waving her handkerchief to her friends and countrymen on the shore.

It was she again—our poor, plain, neglected little girl of former days—who now came back in triumph to her fatherland. But no more poor, no more plain, no more neglected. She had become rich; she had become celebrated; she had in her slender person the power to charm and inspire multitudes.

Some days later, we read in the papers of Stockholm, an address to the public written by the beloved singer, stating with noble simplicity that "as she once more had the happiness to be in her native land, she would be glad to sing again to her countrymen, and that the income of the operas in which she was this season to appear, would be devoted to raise a fund for a school where élèves for the theater would be educated to virtue and knowledge?"

The intelligence was received as it deserved, and of course the opera was crowded every night the beloved singer sang there. The first time she again appeared in the "Somnambula," one of her favorite characters, the public, after the curtain was dropped, called her back with great enthusiasm, and received her, when she appeared, with a roar of hurrahs.

In the midst of the burst of applause a clear and melodious warbling was heard. The hurrahs were hushed instantly. And we saw the lovely singer standing with her arms slightly extended, somewhat bowing forward, graceful as a bird on its branch, warbling, warbling as no bird ever did, from note to note, and on every one a clear

strong, soaring warble, until she fell into the *retournelle* of her last song, and again sang that joyful and touching strain, "No thought can conceive how I feel at my heart."

She has now accomplished the good work to which her latest songs in Sweden have been devoted, and she is again to leave her native land to sing to a far remote people. She is expected this year in the United States of America, and her arrival is welcomed with a general feeling of joy. All have heard of her whose history we have now slightly shadowed out; the expected guest, the poor little girl of former days, the celebrated singer of now-a-days, the genial child of Nature and Art is—JENNY LIND!

Thus, in *The Union Magazine*, writes Miss Frederika Bremer, that noble-hearted woman of Sweden, who is now a sojourner in the United States, of her own country-woman, the world-renowned child of song. To this we will add a few incidents of her early life and history.

Jenny Lind was born in Stockholm, October 6, 1821. At this period her parents were teaching school in that city. When she was yet only three years of age, song was her ruling passion. Every melody she heard was retained with a wonderful accuracy. Her hands did no work without being accompanied with her clear, sweet voice. Even illness did not prevent her from finding consolation in song.

Thus passed her life till Jenny attained her ninth year, at which time she was heard singing at the open window. Her subsequent life has been beautifully portrayed by Miss Bremer in the preceding article. This truly gifted songstress "is of the middle height, fair haired, blue eyed, neither stout nor slender, but well proportioned, meek-looking when her features are at rest, full of animation when they are at play; in short, she is neither handsome nor plain, neither pretty nor ugly."

It is not alone for her musical powers and talents as a singer that Jenny Lind is so universally admired; coupled with these extraordinary qualities, she possesses a modesty and generous benevolence rarely

equaled. A single incident will suffice to give an idea of her character in private life.

While in England, Jenny arrived at the city of Lincoln the day before the engagement for her concert. After the rehearsal she set out on one of her customary rambles in the vicinity of the city, and becoming fatigued, she entered a humble dwelling by the roadside, and asked permission to rest herself.

The good woman of the cottage handed her a chair. All in the room was neat and clean, yet bore evident marks of poverty. Three fine boys were playing on the floor, and another child lay in the cradle. Jenny began to question her hostess, and learned that her husband, who was a laborer, died a few months before, after a long illness, leaving her in destitute circumstances.

Jenny bent over the cradle, as a tear fell from her eye, and lifting the child in her arms, caressed it, while the poor woman began to talk of other matters. She had heard of Jenny Lind's expected arrival in the city, and asked her guest if she had ever heard her sing. "Yes, very often," was Jenny's reply. "I too can sing, and if you would like it, I will sing you one of Jenny's favorite songs;" and hardly waiting a reply, she commenced one of her charming melodies.

The poor woman loved music, and when the song was finished she expressed her great delight. Jenny rose and exclaimed, "Now you too may say that you have heard Jenny Lind sing." As she said this, she took the woman by her hand, slipped into it a five-pound note, and immediately left the cottage.

Jenny Lind has made an engagement with Mr. P. T. Barnum, the proprietor of the American Museum, to visit the United States, and give concerts in the principal cities of our Union. For these services Mr. Barnum pays her the sum of two hundred thousand dollars, besides all her expenses from Europe and during her residence here. She is expected to arrive in New York early in September. No other singer could command any thing like the price paid to Jenny Lind for visiting our shores.



## Coats of Arms, or State Seals.—No. 5.



### NEW JERSEY.

**T**HE seal of the state of New Jersey consists of a white escutcheon, bearing three ploughs—fit representatives of the agricultural interests of the state. The crest is a horse's head resting on the top of the shield. The supporters are *Liberty* on the right, holding her wand and cap in her left hand, and *Ceres*, the goddess of agriculture, on the left. Her right hand is resting on the escutcheon, and her left supporting the *Cornucopia*, or horn of plenty, which is filled with fruits and flowers.

Around the border of the seal are the words, *THE GREAT SEAL OF THE STATE OF NEW JERSEY; MDCCLXXVI (1776)*. The date, which stands at the bottom of the seal, designates not only the time of its adoption, but also the year in which New Jersey assumed the title of a state.

New Jersey is one of the middle states, and lies south of the eastern portion of the state of New York, with the states of Pennsylvania and Delaware on the west, and the Atlantic ocean on the east. It is

170 miles long and about 50 miles in average width, containing 8,320 square miles. The state is divided into eighteen counties, and in 1847 it contained a population of 416,000.

It is believed that New Jersey was first settled by the Danes, at Bergen, in Hudson county, about the year 1624. In 1627 a colony of Swedes and Fins settled on the Delaware; but many historians think that its colonization should date from the settlement of Elizabethtown, in 1664, as previous to that time but little progress had been made in settling this territory.

In the year 1664, the territory comprising the state of New Jersey was sold by the Duke of York to Sir George Carteret and Lord Berkeley. The state was named in compliment to Sir George Carteret, who had been governor of the island of Jersey, in the British Channel. Elizabethtown was so called from Lady Elizabeth Carteret, wife of Sir George Carteret.

This state presents a diversity of climate as well as of surface and soil. Stretching, as it does, from north to south, about three times the distance of breadth, it presents a great variety of climate for so small an area. A range of the Alleghany mountains crossing the northern part of the state gives the northern counties a mountainous and hilly surface; while the southern portions of the state, lying nearer the ocean, are low and sandy.

Though the northwestern counties are adapted to agricultural pursuits, they are rich in mineral products, containing several mines of iron and copper.

The central portions of the state are fertile and yield the farmer abundant harvests.

The southern counties produce the best peaches, pears, and apples, in abundance. But Monmouth county excels in the quantity of peaches produced. The few York and Philadelphia markets receive their best fruits and vegetables from this state.

The capital of New Jersey is Trenton, situated fifty-five miles southwest from New York, thirty miles northeast from Philadelphia, and ten miles southwest from Princeton. Its population is about 9,000.

The largest city in the state is Newark, situated on the west side of the Passaic river, ten miles west from New York. Its population is 32,000. Newark is noted for its extensive manufactories of leather and carriages, which supply many distant markets.

The great thoroughfare between New York and the Southern States passes through New Jersey; and the inhabitants enjoy superior advantages in regard to distance and facilities for transporting produce and goods to the best markets. This state has 260 miles of railroad, and 143 miles of navigation by canals. The Delaware and Raritan canal extends from New Brunswick to Bordentown, New Jersey, a distance of forty-two miles. This canal is seventy-five feet wide and seven feet deep, allowing sloops of from 75 to 100 tons to pass through it.

The annual elections in the state of New Jersey are held on the second Tuesday in November, and the Legislature meets on the fourth Tuesday in January. The governor is chosen for three years, and receives a salary of \$2,000.

The state of New Jersey is peculiarly interesting from the many events which occurred here during the revolutionary war. Important battles were fought at Trenton, Princeton, and Monmouth, in all of which Washington commanded in person. And in this state he achieved some of his most brilliant victories. It was during this period that the saying, "Terrible times in the Jerseys," had its origin.

### BEHAVIOR IN COMPANY.

**O**N the subject of behavior in company, Leigh Richmond gives the following excellent advice to his daughters:

"Be cheerful, but not gigglers. Be serious, but not dull. Be communicative, but not forward. Be kind, but not servile. Beware of silly, thoughtless speeches; although you may forget them, others will not.

"Remember that God's eye is in every place, and his ear in every company. Beware of levity and familiarity with young men; a modest reserve, without affectation, is the only safe path. Court and encourage serious conversation with those who are truly serious and conversable; and do not go into valuable company without endeavoring to improve by the intercourse permitted you.

"Nothing is more unbecoming, when one part of a company is engaged in profitable and interesting conversation, than that another part should be trifling, and talking comparative nonsense to each other."

*We may glean knowledge by reading, but the chaff must be separated from the wheat by thinking.*

Knowledge is proud that he has learned so much—wisdom is humble that he knows no more.

## Science,

"Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### INTERNAL HEAT OF THE EARTH.

#### VOLCANOES.

**T**HERE are three hundred volcanoes on our globe, and these are scattered over every side of it. If we take a round ball, and mark on its outside three hundred dots, we will perceive that the ball is very thickly dotted over. So with our earth; on every side it is pierced with some of these three hundred openings, through which the fiery interior shines out most brilliantly. Often its molten contents are expelled, to the terror of thousands of our fellow-men.

The large number of volcanoes, their huge streams of lava, and the lofty mountains they have thrown up, announce that the amount of heat in the interior of our earth is most intense, widely diffused, and almost beyond our conception.

#### EXTINCT VOLCANOES.

The number of extinct volcanoes is far greater than the present active ones. In North America, along the whole line of the Rocky Mountains, and through the West Indies, they stand thickly, as monuments of the past. Their craters are as symmetrically formed, and they exhibit the same lava streams, though in a hardened state, as those now burning.

In Germany, along the Rhine, travelers speak of "the castled crag of Drachenfels," the Eifel, and many others, presenting the same phenomenon. The center of France is studded with them, especially about Clermont.

In Italy, the town of Cumea, founded a thousand years before the Christian era, is built in the center of a volcano. There, in a space of sixty miles in length by ten in breadth, are sixty extinct craters, one of which is two miles in diameter. All these, with others in every quarter of the globe, should be joined with the three

hundred that are now burning, and we would have full proof of the fiery wonders in the interior of our globe.

#### EARTHQUAKES.

The causes of earthquakes are the same as the causes of volcanoes. This we know, for all their phenomena are the same. First, there are strange, alarming noises from beneath, then a quaking of the ground, often risings and fallings of the surface, like long waves of the sea, then violent rents in the solid surface of the earth, then emissions of flames, vapors, smoke, and melted rocks.

If, after a few weeks, all ceases, and the natural calm follows, then we say there has been an earthquake; but if the emissions last a while longer, then we call it a volcano. Often men doubt whether to call the phenomenon a short volcano or a prolonged earthquake.

There are every conceivable gradation and intermixture among these phenomena, and the interior heat of our planet in some way produces both these classes of terrific wonders. Permanent volcanoes are, indeed, thickly set around the globe, but not in every district. Earthquakes, however, occur in every region, and hence they reveal the great fact that the internal heat of our globe is glowing beneath every spot of ground wherever we may tread.

#### HOT SPRINGS.

Hot springs occur in every country on the globe. They abound most among mountains, because there the crust of the earth has been broken and elevated, and a more ready escape for the internal heat has been formed. Hence, in the United States, they boil up most numerous among the Alleghanies, Ozark, and Rocky Mountains.

In Europe, they mostly rise out of the Alps, the Pyrenees, and the Apennines. Sometimes they spring up from level plains. It is the same in Asia, Africa, Oceanica, and both the Americas. They are hottest when volcanoes are most active, sometimes reaching the boiling point, though in all cases they must be greatly cooled by the waters and the rocks near the surface. The great number of these, and their universal diffusion, prove also the universality of the internal heat of our globe

#### ARTESIAN WELLS.

Artesian Wells are made by boring into the earth till the instrument reaches water, which, from internal pressure, flows spontaneously like a fountain. They are so called because this mode of obtaining water was first practiced in a district of France called *Artois*. These wells may now be found in almost every country, and they often extend several hundred feet into the earth for the purpose of obtaining a copious stream.

They are usually but a few inches wide, and a tube is sunk all the way down to prevent the water from escaping at the sides. The water which boils up from these wells is always warm. At Wurtemberg, in Germany, they are used to warm the water which drives factories; and this prevents their stopping by ice in the winter. The same is the case in Alsace.

In China, Artesian wells are not uncommon. And everywhere the deeper they are sunk, the warmer is the water they bring up. These furnish an additional proof of the universality of the interior heat of our planet.

#### DEEP MINES.

After descending about forty feet, the temperature of the earth remains the same both in summer and winter; below that depth it becomes warmer as we descend. This increase of heat as we go downward, advances with perfect regularity. On an average, around the globe, the increase is one degree of Fahrenheit for every fifty feet.

At the bottom of the mines in Cornwall, England, the thermometer stands at eighty-eight degrees. This is twelve hun-

dred feet below the surface, and much warmer than summer weather in that country.

We can conceive of nothing to stop this advance of heat in the direction toward the center of the earth, and if it continues to increase according to the ascertained average rate, then all known substances must be in a melted condition at a distance of twenty miles below the surface of the earth. At this rate we must cease wondering at the numerous earthquakes and volcanoes, for the crust of the earth must be a mere shell, resting on a molten fluid.

Earthy materials are non-conductors, therefore this internal heat can not escape, or affect us at the surface. In the same manner streams and pools of lava become cooled and hardened on the surface, and thus their heat is confined, and the interior remains many years in a fluid state. Such are some of the most striking evidences of the internal heat of the globe we inhabit.

#### AN INQUIRY.

**W**HY will any metal, in its solid state, be sustained by the same metal in a fluid, or melted state? In other words, why will cold metal swim in melted metal?"

The above inquiry has been sent us from the Haverling Union School, at Bath, N. Y. In reply to it, Dr. Antisell says:

"Generally speaking, a body in the solid condition is heavier, bulk for bulk, than when fluid. To this there are a few exceptions; water is one. When solid as ice, it floats upon the liquid water, because water at the temperature of 39 degrees is heavier than when it is colder or hotter.

"Iron does not form any exception to the general law; as a solid, it is heavier than an equal bulk of melted iron; and if a mass of cold iron *should* float on a molten surface, it is because it contains cavities of air included in or on its under surface, unable to escape. When, however, the mass commences to melt, and allows these to be liberated, the remaining unmelted portion immediately sinks. I think the position taken in the question is untrue, and resembles King Charles' puzzle of the fish."

We shall be happy to hear the views of others on this subject. Those who work with melted metal, assert that the cold metal will float on the same kind when melted. If such be a *fact*, why is it so?

### General Intelligence.

**PRESIDENT FILLMORE, AND FAMILY.**—Millard Fillmore was born at Summer Hill, Cayuga Co., N. Y., Jan. 7, 1800. His father was a farmer in limited circumstances. When fifteen years old he was sent to learn the trade of a clothier, and worked at this for four years. At the age of nineteen he entered the office of Judge Wood, of Cayuga Co., as a law student. He remained here two years, during which time he taught school in the winter.

In 1826 he married Abigail Powers, the daughter of Rev. Lemuel Powers. They have but two children. The eldest, a son, about twenty-two years of age, has just entered upon the practice of law in Buffalo, N. Y.

The youngest is a daughter, a young lady of twenty summers. She graduated at the New York State Normal School, at Albany, in April, 1849, and was afterward engaged as a teacher in one of the public schools in the city of Buffalo—a worthy laborer in the field of mind. As a scholar she was thorough and remarkably efficient, and pursued her studies with an energy and ability seldom equaled by her sex.

She possesses many accomplishments, and an independent, self-reliant character. This is exhibited in the act of becoming a common school teacher, not from necessity, as her father is wealthy, but from choice, as a means of doing good in the world, as well as a discipline to herself to prepare her the better to understand and discharge the duties of life. She was dissatisfied with the fashionable frivolities which engage the attention of so many young ladies, and chose a wiser course—a noble example for the girls of our country.

We have alluded to Miss Fillmore, not as a matter of idle gossip, but as an ex-

ample worthy the daughters of this republic. She is one of whom our country has much more reason to be proud than of all the gay and gaudy women of fashion, who often show as much scorn for school teachers as they do ignorance of the true qualities which should adorn the women of America.

**LIEBIG**, the eminent German chemist, and who probably ranks at the head of the profession, is expected soon to visit the United States for the purpose of giving lectures on chemistry.

**GEORGE COPWAY.**—This celebrated Indian chief has gone to Europe to attend the world's Peace Congress, which was to be held at Frankfort, Germany, commencing on the twenty-second of August. He attracted much attention on his arrival at Liverpool.

**MR. ELIHU BURRITT**, the "Learned Blacksmith," and the great champion of peace principles in this country, is now in Europe, to attend the Peace Congress.

**THE ARCTIC EXPEDITION.**—The expedition sent out from New York in search of Sir John Franklin, left Whale Fish Islands on the 29th of June—all well. Owing to the vast amount of ice that has broken up and drifted southward this season, it is considered a favorable time for making explorations in the arctic seas.

**SIR ROBERT PEEL, AND HIS DEATH.**—Robert Peel was born in 1788, at Tamworth, Stafford county, England. He held various public offices under the British Government, and finally became Prime Minister of England. In 1846 he repealed the Corn-laws, which prohibited the importation into Great Britain of any foreign grains for home consumption, except when the prices rose beyond a certain rate. With this act his name will ever be associated.

On the twenty-ninth of June last he was thrown from his horse and received severe injuries, from which he died on the second of July. At the time of his death he was not the Prime Minister of England, having resigned soon after the repeal of the Corn-laws.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### THE TALE BEARER.

BY MISS ELIZA A. CHASE.

COME here, Mary Lindsay, I want to tell you something," said Julia Wilmot to her schoolmate, one morning. The two girls had a long and close interview, during which Mary exclaimed more than once, "I can not believe it, Julia! it is impossible!"

"It is certainly true, Mary, for I tell you my father was there, and I am glad we know it," returned Julia; and they retraced their steps to the school-house.

"Good morning, girls," said a sweet looking girl of slight and delicate frame, though evidently as old as either of those she addressed. A formal bow from Julia, and a cold "Good morning," from Mary, was the only answer she received, as the two girls turned abruptly away and left her.

A tear trembled in her eye, and her lips quivered; but pressing them firmly together, as if to repel all such emotions, her countenance resumed its sweet and gentle look, and smiles wreathed her thin lips as she received the warm-hearted greetings of various other companions.

Eveline Elwood was some fourteen years of age, but, as has been observed, she was fragile and delicate in the extreme. Her rich, golden hair, parted smoothly back from her transparent forehead, hung in wavy masses around her neck, and with her guileless and confiding look gave her the appearance of almost infantile beauty.

But not in this consisted her great charm of pleasing. It was the kind

and pure spirit which warmed her heart, and gave her that angelic look.

Perfectly unselfish, and willing to sacrifice her own convenience for any one, yet firm and unyielding in what she thought right, she soon became that remarkable thing, the general favorite of both teacher and scholars.

But there was one in whose breast lurked the germs of envy, when she saw that Eveline was not only her superior in the affections of her comrades, but was likely to be a successful rival in a prize competition; and not daring to come out openly against her, she secretly resolved that, "come what would," as she expressed it, "Eveline Ellwood's pride should be mortified."

Poor Eveline! It was her misfortune that her father, an artist of considerable talent, had acquired a habit of using intoxicating drinks, though as yet he had not become incapable of performing his engagements. But a day or two previous to the one on which our story opens, he had been called a few miles from home to sketch a manufactory, which was to be engraved; but meeting some dissipated acquaintances, he was induced to indulge too freely, and was dismissed by his employers, and sent home in disgrace.

Julia's father, passing through the place at the time, had heard the story; and it was this, told in its worst light, and with some important additions, that Mary had pronounced im-

possible. The unhappy man, in his incoherent talk, asked for more liquor, and, on its being refused, wished his daughter there; "for she would give me some; she is the best girl in the world, and never disobeys me," he added. But Julia's version was, that Eveline was in the habit of procuring liquor for her father.

Before night, the story had spread among the girls, and though by many it was indignantly repelled, there were some who, for the first time, remembered that in play, Eveline had tossed her head as if to show her glossy curls; or she had given herself airs because she was the favorite of the teacher; while the more envious thought it no wonder she studied so hard—the prize would purchase many a dram for her father.

Eveline saw a storm was gathering, but she could not divine its import; and with a sad heart and tearful eyes she started for home. It so happened, that the girls who went that way were those who felt most unkindly to her, and as cutting sneers of drunkenness fell on her ear, she hastened on; but Julia kept by her side till she had finished her cruel tale, ending with the taunt, "Do hurry now, your father wants his dram by this time."

The whole truth flashed upon the mind of the sensitive girl, and clasping her hands, she sobbed violently, and regardless of the intense heat of the day she hurried on, wishing only that she might hide her face in her mother's bosom and weep.

But knowing that her mother had griefs enough of her own, she suppressed her emotion as well as she could, and on reaching home, replied to her anxious inquiries concerning her flushed cheeks and painful look, that her head ached severely. But when her poor father, alive to the situation of his idolized child, though full of the

sense of his recent disgrace, laid his hand tenderly on her head and asked if she were ill, she burst into an uncontrollable fit of weeping.

A fever accompanied this unusual excitement; her mental distress, with her long and rapid walk in the hot sun, had been too much for the frail girl, and before morning she was in a raging delirium and dangerously ill. Ere long, the unhappy father had gathered from her words enough to convince him of the cause of her illness, and his agony was beyond description.

That his beautiful, his only child should suffer so keenly for his disgrace was a torturing thought; but if she should die; if her sensitive spirit was so deeply wounded that her slight frame could not endure the shock, there was madness in the thought, and as she fixed her large blue eyes wildly upon him, and, with her slender arms around his neck, pleaded and besought him never to touch the cup again, he thought that sooner than do it, he would drink the fires of Etna.

For days the young girl's life hung upon a thread; but at length the fever abated, and left her weak and helpless as an infant. Slowly but steadily she recovered, and, when able to bear the excitement, she had the inexpressible happiness of hearing her father solemnly vow never to take the intoxicating cup again, which he faithfully kept.

But Julia, the guilty Julia—sorrow and remorse filled her heart; for the cause of Eveline's illness was well known, and the teacher failed not to hold it up as a terrible example to his weeping and penitent scholars.

On her recovery, they went to Eveline, and tearfully asked her forgiveness, which was granted with a smile and a kiss, accompanied by a mild injunction to be careful of the feelings of others, "for," said she, "I would not that my bitterest enemy should suffer what I did on that terrible day."

## THE IDLE SCHOOLBOY.

**C**HILDREN that do not love to study, sometimes go home from school tired and fretful, and complain of the unkindness of their teacher, because he makes them learn their lessons. Sometimes they tease their parents to let them stay at home and play.

Now we hope no little boy or girl who reads the Student will ever do this. If any of you have at times wished your teacher would not require you to study, or that your parents would not send you to school, remember the following story of the Idle Schoolboy.

"I hate my teachers, I hate my school, I hate the very sight of my books!" exclaimed a bright-eyed boy, as he returned from school and threw his satchel on the table.

"Why, Henry, what has happened now?"

"Happened! why, that good-for-nothing teacher kept me after school, because I forgot my lesson. I wish I was a man, I do—there!" he pettishly exclaimed; "then I should have nothing to do with these hateful declensions, these ugly moods and tenses."

"I think an ugly mood has considerable to do with you now, Henry," said his mother, half smiling. "I am

sorry you are so angry, so uncourteous in your language, but, above all, so prejudiced against your books."

"Well, mother, to be punished for forgetting, as if I could help it."

"Was it forgetfulness or ignorance?" asked Mrs. Hall, quietly.

"I'm sure I studied hard enough," answered the boy, blushing slightly; "it's the very lesson I've had three times over."

"No wonder the teacher kept you to learn your lesson," said his mother, with a reproachful look.

"Hateful teacher," continued Henry,

hardly noticing her reprimand; "why is it some boys have to dig off to school every day? I wish I was Tom Jenks; his mother got him a fine place in a store, where he has half a dollar a week, only think; and you are as poor as Mrs. Jenks, and need the money as much. Do let me come from school, mother."

"No, Henry. You little know the misery that an entire want of education entails on a youth. I had rather suffer almost every privation; I would willingly live on bread and water, to secure you such learning as will make you independent of the world when I am gone. I have wept many a time, thinking of my only son's ingratitude toward a mother who is striving to benefit him constantly. Oh, Henry, if you would only love your school!"

Henry looked down with a very red face, and bit his lip.

"You see William Saunders pass here every day," continued Mrs. Hall; "now sit down a moment, and I will tell you something about him; for I knew him when he was very young. He, I presume, little thought that at the age of thirty he should go bending beneath his saw-horse, his cheek sallow, his health ruined by early idleness and dissipation. But all this arose from his hatred for his book."

"How so, mother?"

"Why I have frequently seen him go to school, crying, and uttering all kinds of maledictions on every thing connected with it, just as you so often do. His mother strove for a long time to keep him to his studies, till at last, tired with the trouble he constantly caused her, instead of urging him on with pleasant inducements, or compelling him to go, she weakly surrendered to his entreaties, and the idle boy thought that he had obtained complete happiness.

He avoided school companions, and found more congeniality in those whose



tastes were similar to his own—whose leisure time was occupied in foolish amusements. At first, his pride revolted from the really vulgar and low youths who surrounded him, but his foolish love of pleasure and fun soon reconciled him to their society, for many of them were not over honest, and did not scruple to use means unlawfully obtained, to gratify themselves. It was not long before he became reckless, and a spendthrift.

"However, at the age of twenty-six, he reformed, partially, but his character was almost ruined, and his mind entirely uncultivated. A little learning, now, would have been of great value to him; but he was no accountant, a wretched scrawler, in fact he was fit for no genteel employment.

"I remember my sorrow—he was so fine looking a young man—when I saw him doing small jobs for porter-houses, or engaged in that most contemptible employment, rinsing glasses for the bar-keeper. He seemed to have lost all energy. Finally, he married a pretty, ignorant girl, and now he has a large family dependent upon his poor labor, and the mean pittance it brings him."

"Why, mother! all that trouble, because he did not love school?"

"Yes; and more it will soon bring, I fear, for he can not live long."

"Oh dear! I wish I *did* love school better."

"By being diligent, Henry, you will soon learn with ease, and gain the affection of your teacher. Then you will not find it so hard to attend school. When I die, Henry, I wish to leave you that which is better than houses and lands."

"Oh, mother, don't talk of dying; indeed I will do better; and whenever I want to stay at home, for play, I'll think of William Saunders."

That was a good resolution, and we hope other Henrys will do likewise.

### A CAUTION TO BOYS.

**B**OYS, use no profane language, utter no word that will cause the most virtuous to blush. Profanity is a mark of low breeding; and the tendency of using indecent and profane language is degrading to your minds. Its injurious effects may not be felt at the moment, but they will continue to manifest themselves to you through life.

They may never be obliterated, and when you grow up, you will find at your tongue's end some expression which you would not use for any money. And this expression was learned when you were a boy. By being careful on this point you may save yourself much mortification and sorrow.

"Good men have been taken sick and became delirious. In these moments they have used the most vile and indecent language. When informed of it, after a restoration to health, they had no idea of the pain they had given to their friends, and stated that they had learned and repeated the expressions in childhood, and though years had passed since they had spoken a bad word, the early impressions had been indelibly stamped upon the mind."

Think of this, ye who are tempted to use improper language, and never let a vile word disgrace you. An oath never falls from the tongue of the man who commands the best respect.

Honesty, frankness, generosity, and virtue are noble traits. Let these be yours, and we shall not fear. You will then claim the respect and love of all.

As bees can breed no poison, though they suck the deadliest juices—so the noble mind, though forced to drain the cup of misery, can yield but generous thoughts and noble deeds.

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## Natural History.

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THE EAGLE.

BY HENRY WILSON.

**E**AGLES are found in all parts of the world; yet they never associate in flocks, but live in such solitude that it is quite seldom two are seen together. The home of these birds is amid the towering mountains. There, in those lofty retreats, in places of the most difficult access to man, they build their nests and rear their young.

The Eagle is usually from two to three feet in length, and the outstretched wings measure from six to eight feet. But some are much larger than this. The bill is from three to four inches in length, and very strong. It is supposed that it can strike it through a person's skull, so great is its strength.

The color of these birds differs

widely. The largest and noblest of the Eagle tribe is called the Golden Eagle. The color of his head and neck is a deep brown, with yellowish brown along the breast, and a darker shade of the same color on the back. Some eagles are black, some are gray, others are nearly white.

Eagles are long-lived birds. They often live to the age of a hundred years. It is said by some, that they do not die of old age, but in consequence of their bills growing inward, so that they can not eat.

Among birds, the Eagle is what the lion is among quadrupeds. His strength and swiftness give him the mastery over all the feathered creation. Yet, like the lion, he is said to be generous,

and sometimes will not attack small and weak animals when those that are larger and stronger can be found.

The rook and the magpie often annoy him by insulting cries and petty attacks, but this noble bird will endure their insults calmly for a long while before deigning to punish them for their folly. And terrible is his vengeance when it is called forth.

The Eagle disdains to share his plunder with any other animal, and unless very much distressed by hunger will not eat any thing except what he himself kills. Such is his love of solitude, that all other rapacious birds are driven away from the vicinity of his retreat. It is very uncommon even to see two pair of Eagles in the same mountain.

The nest of this bird is constructed with much labor. It is usually about six feet across, and is composed of more than a cart load of dry sticks and the roots of trees. It is said that they only build one nest, and continue to repair and occupy this from year to year as long as they live.

It is not hollow, like the nests of other birds, but flat on the top. The eggs are only two in number, and it is often the case that only one of these is hatched. The nest of an Eagle, as well as of a hawk and some other birds of prey, is called an aerie.

It is not without great difficulty that Eagles can be tamed. Even when taken young, and treated with kindness, they will sometimes fight with their keeper.

Of all birds the Eagle flies the highest and can see the greatest distance. Sometimes he soars so high that he can not be seen by the human eye; but often at this immense distance its cry can be heard. And such are its powers of vision, that when too high in the air to be visible to man, it can discover a hare, or even a smaller ani-

mal that may be on the ground, and dart down upon it with unerring aim.

He is so strong as to fly away with lambs, kids, geese, and sometimes even with small children. In Scotland, a child happening to be at play out of doors, was seized by an Eagle and borne away to its nest. The parents pursued the robber, and on reaching the nest obtained their child, and found that it had fortunately received no injury from the aerial journey.

At all times the Eagle is powerful and ferocious, but particularly so when bringing up its young. At this time the pair make use of all their courage and strength to provide meat for their brood.

"The quantity of food which these birds convey to their nest is very great. Sometimes it is sufficient to maintain a family. Indeed, an incident is related of a poor man in Kerry County, Ireland, who obtained food for himself and children by robbing a pair of young Eagles of the meat which was brought them by their parents.

"When the young birds became almost large enough to fly, the poor man clipped their wings so as to keep them in the nest that the old birds might continue to bring them food. In this manner was this family supported, with birds, lambs, geese, and hens, during the summer."

Fortunate, however, was it for this poor man that the old Eagles never caught him at their nest, for had they done so, his life would have been in danger.

One of the most striking stories we have met with, relating to the boldness of an Eagle, is told of a little boy in the state of New York.

"Two boys, the one seven and the other five years of age, were amusing themselves in a field by trying to reap, while the workmen had gone to din-

ner. A large Eagle came sailing over them and with a sudden swoop attempted to seize the eldest, but luckily missed him.

"The bird, not at all dismayed, alighted at a short distance, and in a few moments repeated his attempt. The little boy now gallantly defended himself with the sickle which he held in his hand. When the bird rushed upon him he struck at it, and the sickle entered under the left wing and killed it."

On opening its stomach it was found entirely empty, which may account for the cause of such a bold and unusual attack. The little boy escaped unhurt.

The Eagle, with its bold glance and far-reaching sight, its proud air, soaring flight, and wonderful strength, was called by the ancients, "the celestial bird;" and in their mythology was the messenger of Jupiter, and the bearer of his thunderbolts.

In heraldry, the Eagle has been adopted as an emblem of power and liberty. Most fitly has it been chosen as our nation's emblem, and the coat of arms for the United States. Wherever floats the stars and stripes, there waves the Eagle with its outstretched pinions, a most worthy symbol of the Republic of the United States of America.

### ADDRESS TO THE EAGLE.

BY J. G. PERCIVAL.

Bird of the broad and sweeping wing,

Thy home is high in heaven,

Where wide the storms their banners fling,

And the tempest clouds are driven.

Thy throne is on the mountain top,

Thy fields the boundless air;

And hoary peaks that proudly prop

The skies, thy dwellings are.

Thou art perched aloft on the beetling crag,

And the waves are white below,

And on, with a haste that can not lag,

They rush in an endless flow.

Again thou hast plumed thy wing for flight

To lands beyond the sea,

And away, like a spirit wreathed in light,  
Thou hurriest wild and free.

Lord of the boundless realm of air

In thy imperial name

The hearts of the bold and ardent dare

The dangerous path of fame.

Beneath the shade of thy golden wings,

The Roman legions bore,

From the river of Egypt's cloudy springs,

Their pride to the polar shore.

For thee they fought, for thee they fell,

And their oath was on thee laid;

To thee the clarions raised their swell

And the dying warrior prayed.

Thou wert, through an age of death and fears

The image of pride and power,

Till the gathered rage of a thousand years

Burst forth in one awful hour.

And then, a deluge of wrath it came,

And the nations shook with dread,

And it swept the earth, till its fields were flame,

And piled with the mingled dead.

Kings were rolled in the wasteful flood

With the low and crouching slave

And together lay in a shroud of blood,

The coward and the brave.

And where was then thy fearless flight?

"O'er the dark mysterious sea,

To the lands that caught the setting light,

The cradle of liberty!

There, on the silent and lonely shore

For ages I watched alone

And the world, in its darkness, asked no more

Where the glorious bird had flown.

"But then came a bold and hardy few

And they breasted the unknown wave;

I caught afar the wandering crew,

And I knew they were high and brave:

I wheeled around the welcome bark

As it sought the desolate shore,

And up to heaven, like a joyous lark,

My quivering pinions bore.

"And now that bold and hardy few,

Are a nation wide and strong;

And danger and doubt I have led them through,

And they worship me in song:

And over their bright and glancing arms,

On field and lake and sea,

With an eye that fires, and a spell that charms,

I guide them to victory!"

*Selected.*

## LESSONS IN BOTANY.—No. 5.



BONESET.

## CONCLUDING OBSERVATIONS.

BY FLORA MILFORD.

**E**VEN the most casual observer must be struck by the extreme regularity and order presented by the vegetable world, a regularity so beautiful and wonderful as to preclude the idea of its being the work of chance, and to convince us that it is the result of an intelligent and all-wise Cause.

The number of stamens in most plants is either equal, double, or half the divisions of the corolla, and the same number or its multiples usually prevails in other parts of the plant. Thus, the *Oenothera* or evening primrose, a beautiful wild flower with a bright yellow corolla, has eight stamens, four sepals, four petals, stigma four parted, four celled, with the seeds affixed to a four sided columella.

The enchanter's nightshade, a delicate and harmless little plant growing in the woods, has two stamens, calyx two leaved, two petalled, two celled, cells one or two seeded. The poke weed has five petals, ten stamens, ten pistils, berry ten celled and ten seeded. Numerous other instances might be adduced, but the observation of nature itself is better than the same knowledge derived from books, and the person who can not read her beautiful lessons, as presented in the vegetable world, is destitute of one great source of enjoyment.

The insertion of the leaves presents some curious and interesting characteristics. In some plants they grow apparently without reference to order; in others they are geometrically

regular. A common method of insertion is opposite and alternate, particularly in the mint-like plants. The milk weed is also a good example.



OPPOSITE.



ALTERNATE.

In some of its varieties the leaves grow in pairs, others in fours, but all present great regularity. In the bed-straw (*Galium*) the leaves are stellate, the series rising in regular gradation above each other.

The boneset is quite regular and curious in its structure. Its oblong leaves are connate and perfoliate, or joined at the base, with the stem apparently rising through them. It is in blossom at the present time, and may be found in marshy places, and though less showy than many others, it is a valuable medicinal plant, being much used as a tonic.

A remarkable property of leaves is their covering, being furnished with hair or down, included in the general name of pubescence.

As you approach the poles this covering becomes thicker, but the plants of the equatorial regions are destitute of it. It is somewhat wonderful that plants possess the power of acclimation, and, on being removed from a warmer to a colder region, they become enveloped in a suit of clothing to protect them from the inclemencies of their new home, while one from a colder country loses its needless covering and thus accommodates itself to the heat of the climate.

It is said that by the relative thickness of this protection of plants, especially of the coats which cover the

seed, may be predicted the severity of the succeeding winter, and that the Indians of our country counted the coats of the maize or common corn, and laid up their stores of furs accordingly.

Plants differ very much in regard to the size and number of the seed produced. The annuals generally bear the most in proportion to their size; but as the chances are great of infertility, destruction by becoming the food of man or animals, and various other causes, all plants produce much more than is necessary for mere reproduction.

The size of the fruit is not at all proportioned to that of the plant which bears it; and this seeming incongruity has given rise to the well-known story of the man who thought to better nature by causing pumpkins to grow on oaks, and acorns on vines; but an acorn falling upon his eye made him satisfied with the present order of things. But nature has a better purpose in view than the mere avoidance of danger to man.

Fruit-bearing is an exhausting process, and those plants which bear proportionally large quantities of seed are usually short lived. This fact is well known to horticulturists, who from an unusual growth of fruit predict injury to the tree. The vital energy of the plant is too much exhausted in supplying materials for the rapidly growing fruit, and a partial, sometimes an entire cessation of vital action is the result. Hence those orchards which bear very vigorously have to be renewed frequently.

The grass-like plants produce the greatest relative quantity of seed, furnishing not only enough for their own reproduction, but the principal supply of food for man and beast, while the stately forest trees bear comparatively little fruit, and that of a small size. An ordinary plum or cherry tree pro-

duces a greater number of seeds than the largest chestnut or oak.

Intimately connected with the longevity of a plant is the length of time necessary for it to arrive at maturity. The mushroom whitens the fields before the rain is over, but perishes with the next sun. Jonah's gourd grew up in a night and withered in a night, while the more than "century-living" oak, is many years in coming to its prime.

This law of growth and longevity is as true of the seed as of the plant. The earliest fruit is prematurely ripe; it has already the elements of decay, and is consequently unhealthy; and many of the diseases incident to the season are undoubtedly caused, not by eating suitable fruit, but by eating that which is premature and diseased. The first peaches or apples that fall from the tree may look ripe and tempting, but were we to examine closely, we should find the worm banqueting there, an unequivocal evidence that such fruit is totally unfit for the food of man.

There are many facts connected with the germination of the seed which are of much interest and importance, the curious changes by which the apparently inert mass becomes a living, breathing plant. But as the spring is a more suitable time for an explanation of this matter, we defer it for the present.

And now, as the season of flowers is waning, and the bright blossoms, having fulfilled their mission here, like the good and useful of earth, are departing in peace from among us, we leave the pleasant and profitable study of Botany till another spring shall renovate the earth.

Sincerely trusting that the few suggestions that have been offered on this subject may awaken a desire to investigate more fully its details, we leave it, hoping that the influence of these

bright and lovely teachers, with which nature delights to store her pages, may lead you to contemplate the wisdom and goodness of our kind Father, and induce you to cultivate those flowers whose bloom no winter's breath may blight, but which may flourish forever in the bowers of immortality, watered by the pure streams of the river of life.

**INATTENTION OF SCHOLARS.**—Hear what the Youth's Companion says on this subject, and never allow yourself to lose any thing by inattention.

"There are scholars that are inattentive when teachers explain something contained in the lesson, or when remarks are made, which it is wished all should hear. This is treating the teachers with disrespect. It embarrasses them so that they can not say what they desire to with any satisfaction, as it is not agreeable to talk to those who do not wish to hear.

"Scholars that are so inattentive, often lose very important instruction. Let all listen attentively to what teachers say to them."

**A WISE CHILD.**—A child, seven years old, one day said to her mother, "Mother, I have learned to be happy, and I shall always be happy."

"My dear," said her mother, "how can this be done?" She said, "It is not caring any thing about myself, but trying to make others happy."

**ARITHMETICAL TOAST.**—The following excellent toast was given by a schoolmaster:

"The fair daughters of America—may they add virtue to beauty—subtract envy from friendship—multiply amiable accomplishments by sweetness of temper—divide time by sociability and economy—and reduce scandal to its lowest denomination."

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### ROBERT AND THOMAS LEE.

**E**ARLY one morn-ing in August, Rob-ert Lee said to Thom-as, as they were in bed, "Come, let us get up and go to the bay, and bathe."

"No, Rob-ert," said Thom-as, "we can not go; the bay is too far off, and pa and ma said we must not go so far till you were strong-er."

"Why, Thom-as, the bay is not far off, we can soon run there and try to swim."

"No, Rob-ert, I can not dis-obey mamma; and she said we must not go in the sea to-day—you have been so ill."

"But I am not ill to-day. You may lie in bed if you like it, but as for me, I am up now, and I can go to the bay by my-self."

"O do not go to the sea, Rob-ert, I beg of you. I will get up and call our dog, and we can then play on the green; but do not go in the wa-ter."

Rob-ert was not a good boy. He want-ed his own way in all things, and did not ev-en stop to think wheth-er it would do him harm or not.

Some-times he was stub-born,

and would not yield when his par-ents or friends told him what was right.

It was not so with Thom-as. He loved to do right, and would always listen to the ad-vice of his par-ents, and teach-ers.

It made him sor-ry to see his broth-er Rob-ert act so bad-ly; and he tried to have him do right.

Rob-ert had no soon-er said, "I can go to the bay by my-self," than he left his room.

Thom-as ran af-ter and called, "Rob-ert, do not go to the bay; do not go in the sea; you will dis-please pa and ma if you do."

But Rob-ert would not stop. He ran on laugh-ing. "Ha, ha, ha! I am too far for you to stop me," said he.

As soon as he came to the bay he threw off his clothes and ran in-to the wat-er.

When Thom-as came up, Rob-ert called out to him, "You can not get at me now." Then he said, "I am cool now—I am cold—oh, too cold."

As he said this, he gave a loud shriek, put his hands on his head and cried out, "Oh, Thom-as,



my head, my head!" and then fell back in the sea.

Thom-as knew that Rob-ert would drown if he did not pull him out, so he ran in-to the water and drew him to the shore.

It was a long time be-fore Rob-ert could speak, but at length he said, "Oh, Thom-as, I am sick, take me out of the sea, and let me go home."

Thom-as was glad to hear Rob-ert speak, for he then knew that he was not dead. He said to Rob-ert, "You are out of the sea, and I will try to take you home."

Then Thom-as took him on his back and bore him to a fisher-man's hut. He left him in the care of the man who lived there, while he ran home to tell what had hap-pened to Rob-ert.

When Thom-as told where Rob-ert was, Mr. Lee took his horse and wag-on and went after him. He found him in the hut where Thom-as had left him, but he was ver-y sick.

Mr. Lee was hap-py to find his boy still a-live, and he soon put him in his wag-on and drove home.

It was ma-n-y days be-fore Rob-ert got well a-gain. And from this time he be-came a bet-ter boy.

### THINK AGAIN.

**O**H, mother, I wish you would whip Ed-win; he struck me in the face with his hoop stick," cried little Emma, as she came running home from school, with the blood gushing from her lips.

"Why, Edwin," exclaimed the mother, "how came you to hurt your sister so badly? You surely could not have intended to do it."

"No, mother. Sister knows that it was an accident. She came running in my way, when I was driving my hoop, and the stick struck her, I did not.

"Come to me, Emma, and let me wash the blood from your face; then I will punish your brother, if you wish me to. Shall I do so?"

"Yes, mother. He is a careless, naughty boy."

"But think again, Emma; you may be sorry after it is done. You are satisfied that it was an accident, and that you were as much to blame as your brother.

"You were both careless, and that was the way the accident occurred. If I punish him, I shall hurt him more than he did *you*.

"Would it do you any good to see him cry? Would it make

your face feel any better to know that he is suffering pain? Think again. I will do just as you wish. Shall I punish him?"

"No, no, mother," said Emma, quickly; and the tears fell faster than before. "I know he did not mean to hurt me."

"Then go and kiss him and tell him you forgive him for his carelessness; and ask him to forgive you, for your anger toward him."

It was a sweet sight to see the loving children locked in each other's arms kissing away their tears!

Little children, never do or say any thing in anger; but *think again*, and you will always find the second thought is the wisest.

#### THE LITTLE CHILD'S MORNING HYMN.

THE morning bright,  
With rosy light,  
Has waked me from my sleep;  
Father! I own  
Thy love alone  
Thy little one doth keep.

All through the day,  
I humbly pray,  
Be thou my guard and guide;  
My sins forgive,  
And let me live,  
Blest Jesus! near thy side.

Oh, make thy rest  
Within my breast,  
Great Spirit of all grace!  
Make me like thee!  
Then shall I be  
Prepared to see thy face.

#### AUNT ELIZA'S STORIES,—No. V.

##### THE TWO BOYS.

MOTHER, I don't like Edward Orne," said Charles Grey, on coming home from school one night.

"Why do you not like him?" asked his mother; "I am sure Edward is a very fine little boy."

"He hurt me to-night, mother; he threw his ball and hit me on the head, and he meant to hurt me, too."

"O my child, you don't know that. Perhaps it was an accident, and you must not blame him for what he could not help. But even if he did intend to hurt you, you should forgive him, and try to overcome evil with good."

"Well, I told him he was a mean boy, and I would never play with him again, and that he might fish by himself to-morrow, for I wanted nothing to do with such a fellow."

"We will say no more about this now, my son, you are too angry; there is a cloud over your good nature that prevents you from seeing clearly; but we will talk about this matter when you feel more kindly toward little Edward."

Mrs. Grey said this because she knew that her son had done

very wrong in using such unkind language; and as children like to have it appear that they are more innocent than their play-mates, she was sure Charles was as bad as Edward, if not worse.

In a little while Charles was playing away as merrily as if nothing had happened, and his mother was about to call him in to talk with him, when Edward came in on an errand. He looked sad, and Mrs. Grey saw that one of his eyes was inflamed.

"What is the matter with your eye, Edward?" she asked.

"Oh, not much," he answered, blushing. "It was hurt at school to-day."

"Who hurt it?"

"Some of the boys," said Edward, and then asked for what his mother wanted, as if he wished to say no more about his eye.

But Mrs. Grey called Charles in, and insisted that Edward should tell who hurt his eye. He hesitated a while and then said, "Charles did, but I do not think he meant to do it." "I must know the whole, and from you, Edward. Why did he hurt you?"

Edward looked very much pained, and replied: "I was tossing my ball, when it bounded and hit Charles. Then he struck me, for I suppose he thought I

intended to hurt him, but indeed, Mrs. Grey, I did not."

"Did he call you names?"

"He said I was a mean boy; and it would have been mean if I had intended to hit him; but he was so angry, Mrs. Grey, I am sure he did not know what he was saying."

"I regret much that he has done so wrong," said Mrs. Grey, "and I am sure he will do no more," she added, as Charles hid his face and wept.

After Edward had gone, Mrs. Grey talked long and seriously to her son, and though I shall not tell you all she said, yet I assure you it had the effect to make him a better boy.

I am sorry to say there are a great many children like Charles. They become angry at some slight thing, or even at accidents, and commence a quarrel, perhaps a fight, and then tell a fine story for themselves, throwing all the blame on their companions.

How much better would it be for their parents, their teachers, and themselves, if they would say, like Edward, "I do not think he meant to hurt me," or, like the apostle Peter we read of in the Bible, "Brethren, I believe that through ignorance ye did these things."

## THE WATCH KEY.

**R**EMEMBER when my little friend James, who went to the same school that I did, sat in the seat next to mine.

One day he brought a neat little watch key to school, and handed it to me to examine. Then I wished to be the owner of it.

"I'll tell you what I'll do," said he; "if you'll bring me six apples you may have this key."

Pleased at the thought I soon made the bargain. I went home. But how was I to get the apples?

I did not like to ask my parents for them; for they might think it foolish for me to trade for a little key, which would be of no use.

So I did not tell them of what I was about to do; and unknown to any one besides myself, I went into the cellar and filled my pockets with apples, and hurried away to the school, where I soon found James, and settled for the key.

But now I had the key, what must I do with it? If I let my parents see it, thought I, they will wish to know how I came by it—and what shall I say?

If I tell them I gave some apples for it, they will certainly know that I came by them dishonestly.

And reader, being placed in such circumstances, what do you think I did? Instead of letting any one see my little key, I went into the garden, dug a hole, and buried it.

That is the way guilty children do to hide their faults. Like me they little think that though their parents do not see their sins, there is an eye that is watching them continually.

After the key had been buried a few days, my brother and I went into the garden together, and I began to dig. By and by I came across the key.

"Oh, see what I've dug up!" I exclaimed; "see what I have found!" But when I carried it into the house, my parents knew that it could not have been long lost, as it showed no signs of rust.

"Did you really dig it up?" they inquired. What to do I hardly knew, but I told them it was the truth.

They thought that some one must recently have dropped it, and said no more. But I did not feel very happy with my key; I knew that I had obtained it dishonestly.

And thus will all children feel who do wrong, unless they repent, and are sorry for their faults.

## Phonography.—Lesson 5.

Owing to their frequent occurrence, in the English language, the letters *s* and *z* are each represented by an additional character called the *S-circle*. This character consists of a small circle, which stands for *s* when made light, thus *o*, *s*; and for *z*, when made heavy, thus *o*, *z*. This circle is very useful, because it helps to shorten the writing, and renders it more easy to join the other consonant signs.

As this circle is always joined to other characters, it must either precede or follow them. When it precedes, as *sp*, *st*, it is made first, and the consonant represented by a straight line or curve is formed afterward. If it follows another consonant sign, as *ks*, *ps*, *bs*, etc., the circle is made last.

The *s*-circle is made on the upper side of *k*, *g*, and upward *r*, and on the right of the other straight stems. It is always put on the inner side of the curves; even when these are joined to straight stems. Between two straight or two curved stems, it is turned the most convenient way, without regard to its being a perfect circle.

In reading, if a circle is placed at the commencement of the stem, it is read first, and the remainder of the characters are read as if no circle had been used; if placed after the stem it is read last. The same order is observed in reading where two circles are used on one stem.

When a vowel precedes the *s* at the beginning, or follows it at the end of a word, the long *s* is used; because with the use of the circle in such places, the three positions would be wanting which enable us to distinguish the local value of a dot or dash.

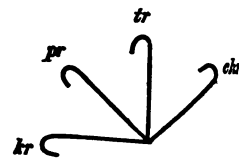
In the English language the two liquids, *r* and *l*, are frequently united with other consonants, as in *pray*, *play*, *brown*, *blew*. The two consonants thus united, forming a kind of double sound, are pronounced by a single effort of the voice. When thus joined to other consonants, these liquids are represented by merely prefixing a hook to the simple letter.

The characters thus used in representing these liquids are called *L-hooks* and *R-hooks*. Examples of each are given below. By holding up the *left* hand, with the fore-finger bent into a hook, and bearing in mind that *left* begins with *L*, it will be easy for the learner to remember on which side of the straight line the *L*-hook is

placed. In thus placing the hand in different positions, the characters, *kl*, *pl*, *tl*, and *chl* are represented; thus



By holding up the right hand, with the fore-finger bent in the same manner, and observing that *right* begins with *R*, the side for this hook is also easily remembered. The different positions of the right-hand finger represent the characters, *kr*, *pr*, *tr*, and *chr*; thus



The consonants *mr*, *nr*, *ml*, and *nl* are not formed on this principle. A hook with heavy curves is used for *mr*, *nr*, and a hook with a light stroke for *ml*, *nl*.

TABLE OF THE L-HOOK AND R-HOOK SERIES.

L HOOKS.				R-HOOKS.			
PL		BL		PR		BR	
TL		DL		TR		DR	
CHL		JL		CHR		JR	
KL		GL		KR		GR	
FL		VL		FR		VR	
THL		THL		THR		THR	
SHL		RL		SHR		ZHR	
ML		NL		MR		NR	

It will be observed from the above table that the stems for *f*, *v*, and *th* are inverted when the *R*-hook is attached to them. Directions for writing these characters and exercises will be given in our next lesson.

## Drawing Department.

DURING the past month the interest felt in drawing and leaf printing has been manifested to us more generally than heretofore. We are happy in hearing that so many little hands have been stimulated to engage in this simple and interesting, yet useful employment; and we sincerely hope many hundreds more will also find a like amusement. It will foster a taste for the beautiful, and lay a foundation for future improvements, the value of which can not be fully appreciated, till after life shall have developed it. To those children that have already practiced drawing and leaf printing, we would exclaim, "Go on!" and advise those who have not yet attempted it to improve their first leisure time in commencing it.

From the pupils of J. M. Horton's school, North Castle, N. Y., we have received a large package of very neat drawings and a few paintings. Among them we find several from Mary Purdy, done with her usual neatness. We think some of Mr. Horton's younger pupils may yet send us specimens that will vie with those from Mary. Names of the pupils that sent us drawings from Mr. H.'s school: Mary Purdy, aged 15; Maria Shelly, 15; Mariett Fisher, 14; Sarah E. Robbins, 14; Deborah L. Green, 13; Maria L. Capron, 12; Freelove B. Green, 11; Mariett Brundage, 11; Sarah A. Merritt, 11; Elma Williams, 8; John Hoodless, 15; Wm. H. Capron, 16; Lewis S. Onderdunk, 13; Reuben Williams, 13; Evander Purdy, 11; Casper C. Odell, 10; Geo. Post, 10; S. W. M. Chattaway, 8.

We have on hand another package of drawings and leaf impressions, from the pupils of Miss Eliza A. Chase, Orangetown, N. Y.

From a few of the pupils of the Haverling Union School, at Bath, N. Y., Mr. E. J. Hamilton, Principal: Mary J. Nutton, aged 13; Emily Gregg, 12; Minerva H. Ellas, 15; Sarah Rogers, 11; Julia R. May, 11; Harriet Secor, 17; Caroline M. Beath, 14; Helen Calkins, 13; Edward H. Underhill, 12; Ann Page, 12.

The pupils from this school display taste in their drawings. We hope to receive more from them, and will send them a package in exchange.

Names of pupils who sent us drawings and leaf impressions, from School District, No. 22, Beemerville, Sussex Co., N. J., Mr. B. F. Smith, Teacher: Letitia Bedell, aged 14; Emma Bockover, 14; Sarah A. Ayres, 14; Mary E. Couse, 14; Sarah Quick, 13; Mary A. Crigar, 12; Sally Lain, 12; Phebe Medaugh, 12; Margaret Bell, 12; Emily Odell, 11; Susan C. Ayres, 10; Frances A. Quick, 10; Harriet L. Couse, 10; Martha Lewis, 10; Amanda Lain, 9; Harriet Kenouse, 9; Theodore Lewis, 14. The leaf impressions are made too black by using too much ink. Practice will enable you to improve them. The drawings are good for beginners.

The pupils of Hobart Seminary, Hobart, Delaware Co., N. Y., Mr. F. L. Hanford, Principal,

have favored us with a noble package of drawings. Several of them are done on Bristol board and executed in a highly commendable manner. These drawings display an excellent taste on the part of the pupil, and reflect much credit on the principal of the institution. Names of the pupils who prepared them: Misses Isabella J. McNaught sent three specimens; Martha J. McCaughan, six specimens; Harriet C. Scott, one specimen; Charlotte E. Foot, aged 14, five specimens; Frances E. Babcock, 13, two specimens; Mary Monson, 13, six specimens; Frances A. Wilcox, 13, two specimens; Clarissa M. Wells, 14, two specimens; Mary J. Foote, 12, two specimens; Helen E. Wilcox, 11, three specimens; L. Emilia Perkins, 10, two specimens; Sarah E. Noble, 10, two specimens; Maria T. Champlin, 10; Frances L. Kilpatrick, 8; Clarissa S. Noble, 9, and G. Griffin Perkins, 11, two specimens. Here is a fine chance for emulation. Who will send us something to excel the drawings from Mr. Hanford's pupils.

From the pupils of Miss Cynthia A. Osborn, North Hempstead, L. I.: Mary Titus, aged 10; Mary T. Willets, 13; Catherine M. Post, 13; Elizabeth R. Post, 15; Ann Augusta Layton, 12; Anna Willets, 10; Mary W. Titus, 6; Wm. K. Mott, 10; Stephen Rushmore, 9; Henry Titus, 9; James Conklin, 9; Samuel Titus, 12; Wm. Rushmore, 9; John S. Hicks, 7; David Smith, 10; Willie Willets, 6. We are happy to see, from specimens recently received, that these pupils have made good improvement since sending us their first package of drawings.

From the pupils of School District, No. 8, Ramapo, Rockland Co., N. Y., Mr. J. C. Balsdon, Teacher: Catharine Conklin, aged 11; Martha A. Gurnee, 11; Margaret A. Foushay, 13; Ann E. Lake, 12; Sarah J. Conklin, 8; Samuel F. Allen, 9; Albert Lydacker, 10. Accompanying the above, we received two neat sheets of leaf impressions from Mary Frances Finch, aged 14, a pupil of the same school. Mary has made a good beginning. Several of the drawings are also good.

From Mrs. Pollard, of Henniker, N. H., we have received half a dozen sheets of leaf impressions. We suppose them to have been executed by her children. Names of those who sent drawings from the same place: M. E. Pollard, aged 11; E. H. Pollard, 13; Emily Bell, 12. This is a good beginning in New Hampshire. Shall we not hear from other towns in the Granite State?

We have received another package of the Leaf Register from the leaf press, conducted by the pupils of Mr. Horace Warner, District No. 8, Branchville, N. J. We would suggest, friend Warner, that your pupils give a brief description of each plant, telling where it is found, how high it grows, when it blossoms, its use, etc. We wish all others would do the same.

The pupils of the Branchville Academy,

Branchville, N. J., Mr. M. C. Sibbet, Principal, have sent us six books of leaf prints, each containing two sheets of white paper, and three sheets of yellow tissue paper, the whole neatly tied with a blue ribbon. The leaf prints are all done in green colors, but not as we supposed when speaking of it last month. Mr. S. informs us that the colors are made by using common oil paint, very finely ground and carefully prepared.

Some weeks since we received a few drawings from the pupils of Miss H. A. Carver, Shrub Oak, Westchester Co., N. Y., which should have been noticed in a former number, but were overlooked by a mistake. Names of the pupils: Julia A. Conklin, aged 14; Sarah R. Curry, 14; Matilda Hall, 12; Jane S. Curry, 12. We hope to hear from these pupils again, and shall try to notice them in due season.

### Editor's Table.

THE NEW YORK STATE TEACHERS' ASSOCIATION held its fifth annual meeting in this city on the 7th and 8th ult., as noticed in our former number. The exercises were mostly lectures and discussions on the subject of education and teaching. Several valuable lectures were delivered, containing many practical hints and useful suggestions. One, on the subject of "School Organization and Classification," by Mr. Wm. F. Phelps, of the State Normal School, at Albany, was in itself a sufficient compensation to the teachers for spending two days in attending the meeting. It contained just what the great mass of teachers want to know, namely, how to do. We hear a vast deal said *about* education, but have far too little instruction on the subject. Teachers want more of the details and practice; they have had theory to their satisfaction.

The "Interests of Education" cover an extensive field, and a laborer may do some good by working in any part of it. Yet with practical and efficient labor, directed to the accomplishment of a definite object, much more good may result from the same amount of effort. We are happy to learn that an important step has been taken in this direction by this Association, which, if carried out, must result very beneficially toward the cause of education. The constitution, which was revised at the last meeting, makes it a prominent object of the Association to organize Teachers' Associations in each county of the State, to be auxiliary to the State Society.

We believe the proceedings and lectures delivered before the Association are to be published for general circulation, but how, when, or by whom, we have not yet been able to learn.

### NOTICES OF NEW PUBLICATIONS.

THE LOGIC AND UTILITY OF MATHEMATICS, with the Best Methods of Instruction, Explained and Illustrated. By Charles Davies, LL.D. Octavo, 375 pages—price \$1 50. Published by A. S. Barnes & Co., 51 John street, New York. 1850.

This work is not a mathematical treatise to be used as a text-book, but a complete and philosophical unfolding of the principles and truths of mathematical science. It is divided into three books. Book I. treats of Logic, both as a science and an art. Book II. treats of Mathematical Science. Book III. explains and illustrates the Utility of Mathematics: first, as a means of mental discipline; secondly, as a means of acquiring knowledge; and thirdly, as furnishing those rules of art which make knowledge practically effective.

It is not only designed for professional teachers, professional men, and students of mathematics and philosophy, but for the general reader who desires mental improvement, and would learn to search out the import of language, and acquire a habit of noting the connection between ideas and their signs; also, of the relation of ideas to each other.

The subject of mathematics, as here treated by Prof. Davies, is far from being dry and abstruse; so clearly has it been presented, that no one who has any love for the subject can fail to find in it something to excite his curiosity and stimulate him to read further.

We have been much interested in our examination of this work, and would earnestly recommend its study to teachers, as a source from which they may obtain a clear and comprehensive view of mathematical science, and how it is constructed; also, of its beneficial results upon the human mind.

DAVENPORT'S HISTORY OF THE UNITED STATES, revised, improved, and brought up to July, 1850. By J. J. Anderson; containing all the events necessary to be committed to memory: with the Declaration of Independence, the Constitution of the United States, and a Table of Chronology. 18mo. 173 pages. Published by Uriah Hunt & Son, Philadelphia.

This work is intended for the use of schools, and is arranged with questions and answers. The important events are brought directly before the pupil's eye, without his spending the time and labor of reading pages and chapters to find them. From the examination we have given the work, we think it presents the history of our country in a comprehensive manner, and one well calculated to secure the object of studying history, when in the hands of a skillful teacher.

THE ILLUSTRATED DOMESTIC BIBLE. Nos. 3 and 4 of this work have been received. Those who wish to obtain an excellent family Bible will do well to subscribe for this. Twenty-five cents per number.

Samuel Hueston, Publisher, 139 Nassau street, New York.

HARPER'S NEW MONTHLY MAGAZINE.—This new publication, commenced in June last, is designed to present to the great mass of the American people, the treasures of the Periodical Literature of the present day. The productions of the best writers of every nation, and articles of commanding interest from all the leading Quarterly Reviews of both Great Britain and the United States, are promised its readers. Each number contains 144 pages, octavo, in double columns. Terms: \$3 00 a year. Address, Harper & Brothers, New York.

## THE FARMER'S CALL.

Very Quick. From "Musical Gems," by Wm. B. Bradbury. By permission.

1. Come, rouse up, ye sloth - ful, the sun's o'er the 'hill; The

2. Your coat from the nail, and your hat from the wall; The

3. And while you are toil - ing, your thoughts raise on high; For

birds are all sing - ing by mountain and rill; The riv - er is sparkling with

cat - tle to pas - ture, the horse from the stall; A - way to the garden! a -

bless - ings to man al - ways come from the sky: From thence come the sunbeams, the

red and with gold; The cat - tle are low - ing, the sheep leave the fold.

way to the field! For food with - out la - bor it ne - ver will yield.

rain and the wind; Who dil - i - gent plow - eth rich har - vest shall find.

## RAISE YOUR VOICES. Round in four parts.

1. 2. 3. 4.

Raise your voices, Raise them high; Till they swell and fill the sky, and fill the sky,



## TO PARENTS.

## THE VALUE OF HOME INFLUENCES ON EDUCATION.

THE following valuable remarks on the importance of Home Influences in the education of children, are extracted from an article in "The Massachusetts Teacher." We hope no parent will fail to read them carefully.

"Good schools are not likely to be estimated too highly. Their influence on all the interests of society, by educating the youth and keeping the public mind awake to the subject of education, can hardly be overrated. But, if I mistake not, there are individuals who, through confidence in the schools, neglect more than they otherwise would the education of their children at home.

"How easily are all the instructor's plans for teaching respect, obedience, and reverence carried into effect with children who have obeyed at home. How ineffectual are a teacher's efforts on a pupil who comes reluctant from a home where the tastes are low and the conversation on trifling subjects, compared with the results of the same efforts on those who have listened to such views of the importance of education that they think school is worth something; to such conversation on common things as to believe that learning is not all in books and recitations; who have the world opened before them by the natural history of what may be spread upon their table, by a knowledge of the manufacture of the articles daily before their eyes, the chemistry of the steaming tea-kettle, and the tumbler of cold water on a warm day, by learning astronomy as they look upon an eclipse, and mineralogy by the wayside. How much more easily will those learn history, who have listened to such discussions on national affairs as has given them some view of the plan and operation of government, to such conversation on passing events as has taught them something of the influences which work among nations, than those will to whom senate, representative, treaty, and confederacy are all new words; who have never heard of any committee except the man who hires the schoolmaster, or any minister except on Sunday—and never doubted that he was plenipotentiary—or of patent, except in the too much neglected washing machine.

With what increased interest and reality is geography invested, as a child listens to an intelligent friend from beyond the sea or mountains. How much a short journey in the country will help a city girl to the elements of which to make true pictures from those descriptions of natural scenery which her book contains; and how much more intelligently will a country girl read of London after she has made even one visit to the chief city of her own state. How much genius will that boy exhibit whose home is enlivened by such sallies of wit and humor as cultivate the imagination and quicken every faculty of the mind.

"But it is said that all these things take time at home. Suppose they do. For what is the time given, if not to be spent in such works as these? But it does not take time. It uses the time for profit which many use for their own or their neighbor's injury. Why may not a child learn tropes at the dinner-table as well as from a book of rhetoric, especially when the instruction is like-

ly to improve his father's digestion? There is time enough, while curiosity is awake from the sight of a rainbow, to teach much about refraction. Every mother looks at the stars enough to teach the constellations to the daughter by her side, and note the planetary changes from night to night. She may teach her much of plants and flowers before youth is past. It takes not long, at the proper time, to teach how plants are nourished, to exhibit the curious joints of the leaves, show how they breathe, and explain the causes of decay.

"With such influences and culture at home as we have hinted at, how different would the teacher's work be. With how much more intelligence would his instructions be received, and how much more would be accomplished for the good of the pupils. The home influence is the greatest of all influences; and if this be defective, no other can repair the injury. Such is the Creator's plan. The home is the child's first and chief school, and only for auxiliary culture are other schools established. To educate to the best of their ability the children whom they have brought into the world is the duty of parents, a duty from which nothing can free them; and schools are sustained because parents can accomplish a part of the work better by bringing the children together and delegating so much of their authority as is necessary to accomplish the purpose of education.

"Are not the school duties now better performed than the home duties? Is not more effort made by teachers than by parents, according to the opportunities of each, to secure constant attendance, intellectual culture, habits of order and system, and correctness in the thousand little practices which are the basis of character?

"But teachers have the care of their pupils only six hours of the twenty-four, leaving ten of activity for them to be subject to other influences, some of them as active as those of the school-room can be, others no less potent because insensible. Many pass a large portion of these home hours in the street and by-places, subject to temptations, witnessing vice, and taking lessons of the base. Within doors, no pleasant and improving employment is provided, and often, instead of kind control, the government exhibits, in its indulgence and severity, an inconsistency and capriciousness, which, in a school-room, would not, and ought not to be tolerated for a single day.

"To have a happy home in youth is almost a guarantee of a good life. I know not who it was that exclaimed, 'Blessed is the remembrance of a happy childhood,' but doubtless, he himself possessed that upon which he pronounced the beatitude. I know not whether a happy youth is more to be prized on account of its favorable opportunity for the healthful development of all man's powers, or for the soothing influence which it will exert on him, as he looks back upon it from the turmoil of active life. Perhaps both are surpassed by the quiet comfort which it will shed on his declining days, when its fruits are ripened into a well-spent life. So powerful is this period, in determining character, that its hopes and aspirations are almost prophetic.

# THE STUDENT

## A LESSON FROM THE LIVES OF FOUR MEN OF GENIUS.

BY CHARLES SUMNER.

PICKERING, STORY, ALLSTON, CHANNING! A grand Quartet! Each, in his peculiar sphere, was foremost in his country. Their labors were wide as the Commonwealth of Letters, Laws, Art, Humanity, and have found acceptance wherever these have dominion.

Their lives, which overflow with instruction, teach one great and commanding lesson, which speaks alike to those of every calling and pursuit—*not to live for ourselves alone*. They lived for Knowledge, Justice, Beauty, Humanity. Withdrawing from the strifes of the world, from the allurements of office, and the rage for gain, they consecrated themselves to the pursuit of excellence, and each, in his own vocation, to beneficent labor. They were all philanthropists; for the labors of all have promoted the welfare and happiness of mankind.

In the contemplation of their generous, unselfish lives, we feel the insignificance of office and wealth, which men so hotly pursue. What is office? and what is wealth? They are the expressions and representatives of what is present and fleeting only, investing their possessor, perhaps, with a brief and local regard. But let this not be exaggerated; let it not be confounded with the serene fame which is the reflection of high labors in great causes.

The street lights, within the circle of their nightly scintillation, seem to outshine the distant stars, observed of men in all lands and times; but gas lamps are not to be mistaken for the celestial luminaries. They who live only for wealth and the things of this world, follow shadows, neglecting the great realities which are eternal on earth and in heaven.

After the perturbations of life, all its accumulated possessions must be resigned, except those alone which have been de-

voted to God and mankind. What we do for *ourselves* perishes with this mortal dust; what we do for *others* lives in the grateful hearts of all who have felt the benefaction. Worms may destroy the body, but they can not consume such a fame. It is fondly cherished on earth, and never forgotten in heaven.

The grand fundamental law of Humanity is the good of the whole human family, its happiness, its development, its progress. In this cause, Knowledge, Jurisprudence, Art, Philanthropy, all concur. They are the influences more puissant than the sword, which shall lead mankind from the bondage of error into that service which is perfect freedom.

Our departed brothers join in summoning you to this gladsome obedience. Their examples speak for them. Go forth into the many mansions of the house of life: scholars! store them with learning; jurists! build them with justice; artists! adorn them with beauty; philanthropists! let them resound with love. Be servants of truth and duty, each in his vocation. Be sincere, pure in heart, earnest, enthusiastic. A virtuous enthusiasm is always self-forgetful and noble. It is the only inspiration now vouchsafed to man.

Like Pickering, blend humility with learning. Like Story, ascend above the present, in place and time. Like Allston, regard fame only as the eternal shadow of excellence. Like Channing, bend in adoration before the right. Cultivate alike the wisdom of experience and the wisdom of hope. Mindful of the Future, do not neglect the Past; awed by the majesty of Antiquity, turn not with indifference from the Future. True wisdom looks to the ages before us, as well as behind us.

We stand on the threshold of a new

age, which is preparing to recognize new influences. The ancient divinities of Violence and Wrong are retreating to their kindred darkness. The sun of our moral universe is entering a new ecliptic, no longer deformed by those images of animal rage, Cancer, Taurus, Leo, Sagittarius, but beaming with the mild radiance of those heavenly signs, Faith, Hope, and Charity.

"There's a fount about to stream,  
There's a light about to beam,  
There's a warmth about to glow,  
There's a flower about to blow,  
There's a midnight blackness changing  
Into gray;  
Men of thought, and men of action,  
CLAR THE WAY.

"Aid the dawning, tongue and pen;  
Aid it, hopes of honest men;  
Aid it, paper; aid it, type;  
Aid it, for the hour is ripe,  
And our earnest must not slacken  
Into play.  
Men of thought, and men of action,  
CLAR THE WAY."

The age of Chivalry has gone. An age of Humanity has come. The Horse, which gave the name to the first, now yields to Man the foremost place. In serving him, in doing him good, in contributing to his welfare and elevation, there are fields of bloodless triumph, nobler far than any in which Bayard ever conquered.

Here are spaces of labor wide as the world, lofty as heaven. Let me say, then, in the benison which was bestowed upon the youthful knight—Scholars! jurists! artists! philanthropists! heroes of a Christian age, companions of a celestial knight-hood, "Go forth, be brave, loyal, and successful!"—*Selected.*

[*Joseph Story* was born at Marblehead, Mass., 1779. He was a distinguished member of the bar, and an excellent prose writer. He died at Cambridge, Mass., Sept., 1845. *Allston*, see page 100, of *The Student* for August, 1850. *Channing* (William Ellery) was born at Newport, R. I., 1780. He was a celebrated Unitarian clergyman, and distinguished as a powerful writer. The last years of his life were spent in Boston. He died, Oct., 1842.

*Quarternion*, the number four. *Juris-prudence*, the science of law; knowledge of the laws. *Chivalry*, this word comes from the French *cheval*, signifying a horse. Chivalry is a military dignity, founded on the service of soldiers on horseback, called knights. *Bayard* was a French military commander, born in 1476, and was killed

in battle in 1524. He displayed admirable bravery and talents, and by his virtue, valor, and generosity gained the appellation of "the fearless and irreproachable knight."]

## THE THUNDER STORM.

BY C. MORLEY.

It came in wild beauty! The flash and the roll,  
The eddying gust and the flying cloud came!  
As the tempest of thought sweeps the sensitive  
soul,

Now bathing in darkness, now wrapping in  
flame.

The deep lurid lightning, veined zigzag the cloud  
That moved in the van of the swift-coming flood;  
And peal upon peal shook the trembling ground,  
Till, torrent-like, streamlets came pouring around.

A flash! All is dark. There, the roar is begun!  
From mountain to cloud hear its wild music run!  
'Tis still! On the roof list the pattering drops  
Playing tunes of their own! Now the melody  
stops.

A flame and a crash! How quick they succeed!  
O Heaven! defend in the hour of our need!  
Thy hand guides the lightning, it doeth Thy will;  
Thou only canst bid the wild tempest "Be still!"  
In Thee we may trust, on Thy goodness rely,  
When storms sweep in fury the face of the sky!

More distant's the flash—the thunder's less loud,  
And there glows the silvery fringe of the cloud!  
The rain hath passed over, the sun bursts in sight,  
The fields are all smiling in dripping delight.  
A rainbow! O Father! send storm and send cloud,  
If visions of beauty like this are allowed!  
ANOTHER is bending above it, where first  
The sun-beam bid grace from the storm-prism  
burst!

'Tis faded and past! like the dreams of the heart  
That rise up unbidden—when cherished depart!  
All nature's refreshed, birds chirrup and soar,  
The insects are humming, the storm is all o'er.

It came in wild beauty! the flash and the roll,  
The eddying gust and the sweeping storm came,  
Like the tempest of thought to the sensitive  
soul,  
Now 'whelmed in rapture, now wafted in flame.

When the well is dry, we learn the worth  
of water. A misspent life brings shame,  
regret, and sorrow.



### PROFESSOR OLMSTED, OF YALE COLLEGE.

**O**ENISON OLMSTED was born at East Hartford, Connecticut, June 18th, 1791. His ancestors were among the settlers of the city of Hartford, having emigrated from the county of Essex, in England. His father was a respectable farmer, of moderate, though competent fortune, but was cut off in the meridian of life, when Denison, his third son, was only a year old.

The days of his childhood were divided between the village school and the labors of the farm, to which he was very early trained. At the age of thirteen, he was placed in a country store, to be educated as a merchant; but, at his own solicitation, he was permitted, at sixteen, to exchange the life of a clerk for that of a student. He entered Yale College in 1809, and graduated in 1813. The two following years were passed in New London, in the instruction of Union School, a select academy for boys.

In 1815 he returned to college, and discharged the office of tutor the two succeeding years, pursuing at the same time the study of theology, under the instruction of President Dwight. In 1817 he

received and accepted the appointment of Professor of Chemistry in the University of North Carolina, entering upon the duties of the office near the close of the year 1818, having occupied the interval in the laboratory of Yale College, as a private pupil of Professor Silliman.

In this situation he spent the seven years following, during which time he commenced, under the patronage of the legislature, a geological survey of North Carolina—an enterprise peculiarly worthy of note, as being the first attempt of the kind ever made in our country.

He published the first scientific account of the gold mines of North Carolina, and made and published some original experiments on the illuminating gas from cotton seed, a new and copious source of light which, it is believed, will one day come into extensive use in the manufacture of gas lights.

In 1825, on the decease of Professor Dutton, Mr. Olmsted was elected to the professorship of mathematics and natural philosophy in Yale College, since changed to that of natural philosophy and astronomy, which station he still occupies.

Professor Olmsted's career as an author began in 1817, with the publication in the *New Haven Religious Intelligencer* of a series of essays, entitled, "Thoughts on the Clerical Profession." The same year he prepared a memoir of President Dwight for the *Philadelphia Portfolio*. In 1824 and '25 he furnished the papers above mentioned, "On the Gold Mines of North Carolina," and on the "Illuminating Gas," etc., for the *American Journal of Science*. Since that time, he has been a frequent contributor to that able and valuable quarterly. He has also furnished for it, as well as for the *Christian Spectator*, the *American Quarterly Register*, and the *New Englander*, numerous reviews and biographical sketches.

His "Introduction to Natural Philosophy" was published in 1831, and the "Introduction to Astronomy," in 1839. The substance of the latter was given to the public, in 1840, in a handsome 12mo, in the popular and attractive form of a series of letters addressed to a lady. One of his last works is the life and writings of his gifted and lamented pupil and friend, Ebenezer Porter Mason, a name which bade so fair to be one of the brightest stars in the sky of that science which both so deeply and so passionately loved.

Such is the biography of Professor Olmsted, copied from the *Yale Literary Magazine*.

## THOUGHTS IN A GRAVE-YARD.

BY EZRA D. BARKER.



VISIT to the city of the dead, when rightly improved, is never without its hallowed influence on the mind and heart. If we are giddy with the vanities of the world, if the present life seems a ceaseless existence, where we may pursue, undisturbed, the dissipating pleasures of time, or if the world seems so precious that we are disposed to make it our final home, it is good for us to guide our steps for once, in a thoughtful mood, to the place where the dead repose, and witness the end of all human honor, wealth, and pleasure.

If we are tired with the toils and cares

of life, if we long for rest and retreat from the perplexities and afflictions of a wicked world, let us wend our way to the silent inclosure where rises the marble and bends the willow. There we may see the many turf-crowned mansions appointed for all the living. There we may find that safe retreat where the wicked cease from troubling and the weary are at rest.

The wants and woes, the joys and sorrows that move and control the living multitudes around, are powerless to break the sweet and tranquil slumbers of the dwellers in the tomb. The golden light of day or the starry radiance of night, the wild tempests of winter or the calm dews of summer, can never charm them back to life or open for them the doors of the grave. The rolling thunder, the heaving earthquake, or the warring of angry elements disturb not that last, long sleep.

Here all is peace and quiet, and, save the murmur of flowing winds or the solemn chorus of falling waters, an everlasting stillness reigns. Here, side by side, lie friend and foe, mingling their common dust in the bosom of their mother earth. The lifeless clay forgets to war against itself, and the hand of tyranny is crumbling with the limbs it once bound. The tongue of scandal ceases its work of wickedness, and dissolves with the fair brow it once denounced and defamed.

Here rest those of every age, rank, and sex—those who might people an entire hamlet, or perform all the duties and sustain all the relations of a world. Here they came, one by one, led by the painful hand of lingering disease, or struck from the midst of friends and pleasures by the keen scythe of Time without a moment's warning.

The laughing boy, with crimson cheek and pearly brow, as he played with glittering sands and pebbles by the purling brook, or chased the butterfly over the dew-spangled meadow, obeyed the call of death, and, with an imploring look, turned away from weeping friends and the beautiful earth, and laid him down amid the bloom of youth and innocence to an early sleep in the sepulcher of his fathers.

The busy man, as he gravely pursued the affairs of business or state, and strained

his eager grasp for riches and honors, suddenly felt his firm footing tripped by disease, and in a moment he was on his way to "the narrow house," and his couch beneath the sod. The man of many years after passing through every stage of life, wasted and worn, at length arrived at the goal of his earthly career, and passed gently away to "that bourne from whence no traveler returns."

The grave-yard—who does not like occasionally to enter its sacred inclosure, and invite to himself serious and profitable thoughts? Who is there, so far removed from the common lot of humanity, as not to have friends who are the voiceless inhabitants of its dark and silent halls?

Who is so thoughtless as not to look upon it as the final resting-place of his world-worn body, and his last and most enduring earthly home? And who would not wish that the grave which opens to receive his lifeless dust, might prove but the portal of his spirit to a brighter and happier world?

Viewed aright, the grave is but the storehouse of the gross and mortal part of our being, while the soul is made free and speeds its way to the land where gush the fountains of immortal life, and where shines the sun of eternal blessedness.

### EXTRAVAGANT LANGUAGE.

**O**FTEN have we been pained at listening to the frequent use of extravagant language by the young, and have wished that those who used it could but experience feelings like those produced in our own minds; for we are sure, did they but realize how it appears to others, they would break from the habit.

The following, from the pen of the Rev. A. P. PEABODY, is the best we have seen on this subject, and we commend it to the careful attention of ALL, both young men as well as young ladies, who are under the influence of this pernicious practice.

There is an untasteful practice which is a crying sin among young ladies; I mean the use of exaggerated, extravagant forms of speech: saying splendid for pretty, mag-

nificent for handsome, horrid for very, horrible for unpleasant, immense for large, thousands, or myriads, for any number more than two.

Were I to write down, for one day, the conversation of some young ladies of my acquaintance, and then to interpret it literally, it would imply that, within the compass of twelve or fourteen hours, they had met with more marvelous adventures and hair-breadth escapes, had passed through more distressing experience, had seen more imposing spectacles, had endured more fright, and enjoyed more rapture, than would suffice for half a dozen common lives.

This habit is attended with many inconveniences. It deprives you of the intelligible use of strong expressions when you need them. If you use them all the time, nobody understands or believes you when you use them in earnest. You are in the same predicament with the boy who cried "wolf" so often when there was no wolf, that nobody would come to his relief when the wolf came.

This habit has also a very bad moral bearing. Our words have a reflex influence upon our characters. Exaggerated speeches make one careless of the truth. The habit of using words without regard to their rightful meaning often leads one to distort facts, to mis-report conversations, and to magnify statements in matters in which the literal truth is important to be told. You can never trust the testimony of one who in common conversation is indifferent to the import, and regardless of the power of words.

I am acquainted with persons whose representations of facts always need translation and correction, and who have utterly lost their reputation for veracity, solely through the habit of overstrained and extravagant speech. They do not mean to lie; but they have a dialect of their own, in which words bear an entirely different sense from that given them in the daily intercourse of discreet and sober people.

Nothing is more noble than fidelity; faithfulness and truth are the best endowments of the mind.

## TO THE MEMORY OF JAMES DIVINE.\*

BY EZRA D. BARKER.

And thou art gone, esteemed, lamented friend—  
Hast passed away from earthly scenes, to dwell  
Among the ransomed in the realms of peace  
And now thy mortal frame is resting where  
The early autumn beams are glancing down  
Thy native hills, and sparkling in sweet brooks,  
That lull thee to thy last repose with deep  
And plaintive melody.

It seems not so!

'Twas but as yesterday, when swelling buds  
And tender spires were springing into life—  
When messengers of spring began to hail  
The opening year, and all the world seemed glad,  
We met thee full of life and hope upon  
The verge of manhood. Long and happy years  
Then rose before thee in the glass of time,  
And friends and fortune smiled to cheer thee on  
To meet the duties of a busy world.  
The hollow cheek and hoary head, when passed  
Thy manly form, looked up to sigh and wish  
Their prospects fair and bright as thine.

But soon the day of sickness came, and, stretched  
Upon thy couch, the lagging hours wore slow  
And wearily away. 'Twas then we met  
Ounce more. Still beamed thine eye undimmed,  
And ardent unsubdued, expectant smiled  
Upon thy brow, as fever burned within  
Thy veins and struggled with thy beating heart.

Day after day passed by, as nature strove  
With stern disease, until thy fate was poised  
Upon the very verge of life; and when  
At length thy ~~union~~ was sealed and friends de-  
spaired,

Thou didst not tremble at the thought of death,  
Nor fear to meet his coming; but with calm  
And noble resignation to the Will  
Supreme, didst bow thyself to His behest,

[\* JAMES DIVINE was born Dec. 6, 1823. He graduated at the New York State Normal School, at Albany, in March, 1846. We first became acquainted with him a little more than eighteen months ago; he was then employed as a teacher in a Public School in this city. He remained in the same situation until last spring, when he entered a school at Jersey City, and was there engaged in teaching until some time in July last, when he was attacked with a remittent fever. He died Sept. 4, 1850.

Mr. Divine was a young man of promising talents, self-reliant, ambitious, and full of energy. As a friend he was warm-hearted and ardent. He carried with him those pleasant feelings and sympathies, united with vivacity, which shed a kind of sunshine wherever he went. As a teacher, he labored earnestly and faithfully for the improvement and elevation of his pupils.—Ed.]

Who "doeth all things well," and close thine eyes  
Forever on the joys of earth.

Thou didst not die alone: around thy couch  
Stood weeping friends, and there, with deepest  
grief,

The sacred fountains of a mother's heart  
Were stirred, as she beheld that arm, which once  
She thought the stay of her declining years,  
Lie cold and powerless.

There yet was one,

Whom hope forsook, as light and life forsook  
Thine eye. As clouds and tempests oft roll back  
Upon the tranquil face of morning skies,  
Obscuring all their brightness—so the shades  
Of darkest sorrow came with sudden fall  
Around the glowing visions of her young  
And faithful love.

But thou art not forgot:

With memory's fadeless laurels will we weave  
A living chaplet round the happy past,  
Where we may ever find those treasures dear—  
Thy fervent friendship, and exalted worth.  
And while we mourn thy loss, one radiant star  
Illumes the night of our affliction—'tis  
The blissful hope that we shall meet again.

## FAREWELL MY NATIVE LAND!

[Written for Kah-ga-gah-bowh (Geo. Copway), a Representative from the Northwest Tribes of American Indians, to the Peace Convention, at Frankfort-on-the-Maine, Germany, and recited by him on board the British Steamship Niagara, at the hour of sailing from Boston, July 10, 1850.]

THE day is bright'ning which we long have sought.

I see its early light and hail its dawn;  
The gentle voice of Peace my ear hath caught,  
And from my forest home I greet the morn.  
Here, now, I meet you with a brother's hand—  
Bid you farewell—then speed me on my way  
To join the white men in a foreign land,  
And from the dawn bring on the bright noonday.  
Noonday of Peace! O, glorious jubilee,  
When all mankind are one from sea to sea.

Farewell my native land, rock, hill, and plain,  
River and lake, and forest home adieu;  
Months shall depart e'er I shall tread again  
Amid your scenes, and be once more with you  
I leave thee now; but whereo'er I go,  
Whatever scenes of grandeur meet my eyes,  
My heart can but one native country know,  
And that, the fairest land beneath the skies.  
America! farewell; thou art that gem,  
Brightest and fairest in earth's diadem.

Land, where my fathers chased the fleeting deer;  
 Land, whence the smoke of council fires arose;  
 Land, whose own warriors never knew a fear;  
 Land, where the mighty Mississippi flows;  
 Land, whose broad surface spreads from sea to sea;  
 Land, where Niagara thunders forth God's praise,  
 May peace and plenty henceforth dwell with thee;  
 And o'er thee War no more its banner raise.  
 Adieu my native land—hill, stream and dell—  
 The hour hath come to part us—fare thee well!

J. S. A.

### REMEDY FOR FITS.

**H**UMPHREY has a happy singularity in the presentation of moral lessons, and one which often produces a more permanent effect by its quaintness than a long lecture. Here is something from him too good to be lost.

Though no doctor, I have by me some excellent prescriptions; and as I shall charge you nothing for them, you can not grumble at the price. We are most of us subject to fits; I am visited with them myself, and I dare say you are also; and now then for my prescriptions.

*For a Fit of Envy.*—Go to a watering-place, and see how many who keep their carriages are afflicted with rheumatism, gout, and dropsy; how many walk abroad on crutches, or stay at home wrapped up in flannel; and how many are subject to epilepsy and apoplexy.

*For a Fit of Passion.*—Walk out in the open air; you may speak your mind to the winds without hurting any one.

*For a Fit of Idleness.*—Count the tickings of a clock. Do this for one hour, and you will be glad to pull off your coat the next, and work like a slave.

*For a Fit of Ambition.*—Go to the church-yard and read the grave-stones; they will tell you the end of ambition. The grave will soon be your bed-chamber, and the earth your pillow.

*For a Fit of Repining.*—Look about you for the halt and blind; visit the afflicted and deranged, and they will make you ashamed of complaining of your lighter afflictions.

*For a Fit of Despondency.*—Look on the good things which God has given you

in this world, and at those which He has promised to His followers in the next. He who goes into the garden to look for cobwebs and spiders, no doubt will find them, while he who looks for a flower may return into his house with one blooming in his bosom.

*For all Fits of Doubt, Perplexity, and Fear.*—Whether they respect the body or the mind, whether they are a load to the shoulders, the head, or the heart, the following is a radical cure, which may be relied on, for I had it from the Great Physician: "Cast thy burden on the Lord, He will sustain thee."

### BELL BIRD.

**I**N the forests of Guiana there is a bird much celebrated with the Spaniards called *campanero*, or bell bird. Its voice is loud and clear as the sound of a bell; it may be heard at the distance of two or three miles. No song, no sound can occasion the astonishment produced by the tinkling of the *campanero*.

He sings morning and evening, like most other birds; at mid-day he sings also. A stroke of the bell is heard, a pause of a minute ensues; a second tinkling, and a pause of the same duration is repeated; finally a third ringing, followed by a silence of six or eight minutes. "Acteon," says an enthusiastic traveler, "would halt in the heat of the chase;" Orpheus would let fall his lute to listen; so novel, sweet, and romantic is the silver tinkling of the snow-white *campanero*.

This bird is about the size of a jay; from its head arises a conical tube, about three inches long, of a brilliant black, spotted with small white feathers, which communicates with the palate, and which, when inflated with air, resembles an ear of corn.—*Selected.*

THE formation and steady pursuit of some particular plan of life has justly been considered as one of the most permanent sources of happiness.

It is good manners to let others speak first



## Coats of Arms, or State Seals.—No. 6.



### DELAWARE.

**T**HE seal of the State of Delaware consists of an azure shield, divided into two equal parts by a band. On the lower part, or base, of the escutcheon is represented a cow, and in the upper part are two symbols designed to represent the agricultural interests of the state. One is a sheaf of wheat, and the other a stalk of tobacco.

The supporters consist of two men, a sailor and a hunter. The sailor stands on the left of the escutcheon, partly leaning against it, with the elbow of his left arm resting on the top and holding the crest—a ship under full sail—in his left hand. The hunter stands on the right of the shield with his right hand resting on it, and his left supporting a gun.

At the bottom of the shield is the date of its adoption, M.DCC.LXXIII. (1793); and around the border are the words, GREAT SEAL OF THE STATE OF DELAWARE.

The State of Delaware is the smallest and most southern of the middle states. It is also the smallest state in the Union, excepting Rhode Island. Delaware joins

Pennsylvania on the north, is bounded on the northeast by Delaware Bay, on the southeast by the Atlantic Ocean, and on the south and west by Maryland. It is one hundred miles in length, and twenty-one miles in average breadth, containing an area of 2,120 square miles.

This state is divided into only three counties, and contains a population of 80,000. The capital is Dover, situated on Jones Creek, ten miles from its entrance into the Delaware Bay. Its population is about 4,000. The largest and most important town in the state is Wilmington. It is situated in the northern part, between Christiana and Brandywine creeks, about one mile from their confluence. It contains 10,000 inhabitants.

Delaware was settled in 1627 by the Swedes and Finns, near Wilmington, along the shores of the Delaware Bay. The country was then called New Sweden. Delaware Bay received its name from Lord De La War, who died on it. The state was so called in 1703 from the bay on which it lies.

The governor of this state is chosen once

in four years, and can not be re-elected. His salary is \$1,333. The elections are held on the second Tuesday in November. The Legislature meets on the first Tuesday in January, once in two years. There are twenty academies and about one hundred and fifty common schools in the state, with a school fund of \$170,000.

The Chesapeake and Delaware Canal crosses the northern part of this state, uniting the two bays from which it takes its name. It is thirteen miles in length, sixty-six feet wide on the surface of the water, and ten feet deep. It is traversed by steamboats, packets, and merchant vessels.

This canal extends over one of the most unfavorable tracts of ground ever crossed by a similar work. It passes through a hill four miles long and ninety feet high, by a deep cut, the deepest on any canal in the world. The Summit Bridge which crosses the canal at this place is a single arch of 255 feet in length.

An important and valuable national work in this state is the Delaware Breakwater. This is situated in the Delaware Bay, near Lewiston. It consists of two substantial, solid stone piers, one 1,700 feet long, designed as an "ice-breaker;" the other, 2,800 feet long, extending in an angle toward the shore from the first, is called the "Breakwater."

This work was constructed by the United States Government about twenty years ago, and cost three millions of dollars. It is designed to afford protection to vessels passing that exposed part of the coast in stormy weather.

The mouth of the bay is twelve or thirteen miles wide, and exposed to the full force of the waves of the ocean, which, in an easterly storm, are exceedingly violent. And the ice which floats down the Delaware River is often not less dangerous.

The Breakwater is constructed in the manner best calculated to withstand and destroy the force of the waves and the fields of ice. Thus is furnished an artificial harbor, affording safety for vessels when the weather is such that they could not survive its fury if outside. The value of this work will be felt when it is remembered that there is no other place of refuge within a great distance.

## BE POLITE.

**T**HE following extract from one of Abbott's works is worthy the consideration of every one.

A clergyman once said it was beneath the dignity of a Christian to be a gentleman. His practice was consistent with his principle. Rude in feelings and uncultivated in manners, he trampled on all the civilities of life, and rendered himself almost universally obnoxious.

Though every man can not be acquainted with the rules of highly refined society, no one is excusable for being harsh, and rude, and uncivil. He who has a heart glowing with kindness and good-will toward his fellow-men, and who is guided in the exercise of these feelings by good common sense, is the truly polite man.

Politeness does not consist in wearing a white silk glove, and in gracefully lifting your hat as you meet an acquaintance; it does not consist in artificial smiles and flattering speech, but in sincere and honest desires to promote the happiness of those around you; in the readiness to sacrifice your own ease and comfort to the enjoyments of others.

The poor negro women who found Mungo Park perishing under the palm trees of Africa, and who led him to their hut, and supplied him food, and lulled him to sleep with their simple songs, were genuinely polite. They addressed him in the language of kindness and sympathy, and did all in their power to revive his drooping spirits.

True politeness is a virtue of the understanding and of the heart. It is not like the whitened sepulcher, or like Sodom's far-famed fruit. There are no rules for the exercise of this virtue more correct and definite than those laid down in the New Testament. There is no book of politeness comparable with the Bible. Let us examine some of these directions.

"Love your enemies, bless them that curse you, do good to them that hate you, and pray for them that despitefully use you and persecute you. See that ye love one another with a pure heart fervently. Love worketh no ill to his neighbor."

## Science,

"Flame tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### HOW THE CANDLE BURNS.

**T**HE following description of the process by which a candle burns, is prepared from "The Chemistry of a Candle," published in "Dickens' Household Words."

By looking down on the top of a wax candle, a little cup full of melted wax may be seen just around the wick. The cool air keeps the outside hard so that a rim is formed which prevents the melted wax from running down the side. The wax in the little cup goes up through the wick to be burned, just as oil does in the wick of a lamp. It goes up through the little passages in the cotton wick, because very small channels, or pores, have the power in themselves of sucking up liquids. This power is called capillary attraction.

When the candle is blown out, a smoke rises from the wick. If a bit of lighted paper be held in this smoke, the candle will light again without touching the flame to the wick. This shows that the melted wax sucked up through the wick is turned into vapor, and it is the vapor which burns and communicates fire to the wick.

When the candle is lighted, the heat of the burning vapor keeps on melting more wax, and that is sucked up within the flame, where it is turned into vapor and burned; and this process is continued until the wax is all used up, and the candle is gone, or burned up, as it is termed.

Notwithstanding the flame of the candle looks flat, it is both round and hollow, and runs up to a point. It is thus drawn up by the hot air. Hot air always rises, and that is the way smoke is taken up a chimney. It goes up with the current of heated air.

The bright flame of the candle is often no thicker than a sheet of paper, and it does not even touch the wick. That the flame is hollow may be seen by taking a piece of white paper and holding it for a

second or two down upon the candle flame, keeping the flame steady. When the black from the smoke has been rubbed off, it will be seen that the paper is scorched in the shape of a ring, while inside of the ring it is only soiled, and not scarcely singed at all.

Inside of this hollow flame is the vapor spoken of just now. By putting one end of a bent tube into the middle of the flame, and the other end in a bottle, the vapor, or gas, from the candle will mix with the air in the bottle. If fire be set to this mixture of air and gas, it will explode with a report.

The flame of the candle, then, is a little shining case, with gas inside of it and air on the outside, so that the case of flame is between the gas and the air. The gas keeps going into the flame to burn, and, when the candle burns properly, none of it passes out through the flame, and none of the air gets through the flame to the gas. The greatest heat of the candle is in the case of flame.

A candle will not burn without air. If it has not enough air it goes out or burns badly, so that some of the vapor inside of the flame comes out in the form of smoke. A candle smokes because the wick is so large that in burning it makes too much fuel, or vapor, in proportion to the air that can get to it, consequently some of the vapor must escape in the form of smoke.

The smoke that comes out of a candle is what burns and makes the light. This smoke is a cloud of small dust, and the little grains of dust are bits of charcoal, or carbon. These are made in the flame, and burned by it, and while burning make the flame bright. They are burned the moment they are made, but the flame goes on making more of them as fast as it consumes them; and that is how the flame keeps bright.

These little grains of carbon are made

the case of flame itself, where the longest heat is. The great heat separates them from the gas which comes from melted wax, and as soon as they touch the air on the outside of the thin flame they burn. Carbon, or charcoal, is what gives the brightness of all lamps and candles, as well as gas light; hence there must be carbon in what they are made of.

#### WHAT BECOMES OF THE BURNED CANDLE.

By many persons it is supposed that the candle, when consumed, burns to nothing. This is not the case. Every thing and every body goes somewhere; nothing is annihilated, hence the matter of which the candle is composed must still exist, though it may be changed to forms widely differing from those by which it is known as a candle.

You have already learned that the wax or tallow of a candle turns into vapor, which produces the flame by burning; and now we will tell you what becomes of the vapor when burned. It turns into water, and carbonic acid gas.

If you should hold a long, slender gas-burner over the flame of a candle, and let the flame burn just within the end of it, some of the hot air would come out of the top; but if the glass was cold, a sort of dew would be left behind, in the glass chimney. This dew, when collected, turns out to be water.

Now the dew thus collected in the chimney over the burning candle is partly formed from the candle and partly from the air. Water is composed of two gases—hydrogen and oxygen. One ninth of the water is hydrogen and eight ninths is oxygen. Hydrogen will burn, and when burning produces water. Oxygen will not burn at all, of itself, but it has a wonderful power in making other things burn.

The air we breathe is composed of oxygen and nitrogen. Nothing will burn in nitrogen. No animal can live in it. When the hydrogen from the burning candle comes in contact with air, the oxygen of the air unites with this hydrogen, and water is formed in the dew-like state. Thus it is seen that a part of the candle when burned turns into water.

Now there is another part of the candle

that does not turn into water. It is the stream of hot air going up from it, and that will not condense into dew. Some of this hot stream is the nitrogen of the air from which the candle has taken all the oxygen. But there is something in this stream of hot air besides nitrogen.

If a jar be held over the end of the gas-burner, or long glass tube, the hot air from the candle may be collected. Then, if clear lime-water be put into the jar, and stopped and shaken up, the water will turn milky. The gas thus collected from the burning candle, and which turns the lime-water white, is carbonic acid gas. This gas will not burn; it will put out a light instantly. It is poisonous, and kills animals that breathe it.

Carbonic acid gas is formed from the burning candle by the carbon of the candle uniting with the oxygen of the air, just as the hydrogen does to form water. Carbonic acid gas, then, is simply carbon dissolved in oxygen. When charcoal is burned, it all goes into carbonic acid gas, except the ashes; and these are only the earthy matter that was in the charcoal.

Now you see that a candle-flame is vapor burning, and the vapor, in burning, turns into water and carbonic acid gas. The oxygen in both the carbonic acid gas and the water comes from the air, and the hydrogen and carbon together are the vapor. They are distilled out of the melted wax by the heat. Carbon, alone, can not be distilled by any heat. It can be distilled, though, when joined with hydrogen, as it is in the wax, and then the hydrogen and carbon, mixed, rise in a gas of the same kind as that used in lighting streets in cities. So a candle is a little gas manufactory in itself, which burns the gas as fast as it makes it.

CONDUCTORS OF SOUND.—Water and wood are good conductors of sound, as may be proved by the following experiments:

A bell rung under the water returns a tone as distinct as if rung in the air.

Stop one ear with the finger, and press the other to the end of a long stick or piece of wood, and if a watch be held at the other end of the wood, ticking will be heard, be the wood or stick ever so long.

## General Intelligence.

**JENNY LIND.**—This celebrated singer arrived in New York, by the steamship *Atlantic*, on the first day of September. The hall intended for her to sing in not being then completed, Castle Garden was engaged as a substitute, and that spacious edifice, capable of holding nearly ten thousand persons, has been thronged by immense crowds. It is estimated that from seven to eight thousand persons attended each concert.

For the first concerts the tickets were sold at auction; and \$225 00 was paid for the first one sold. The remainder were disposed of at prices ranging from \$25 00 down to \$3 00. Promenade tickets were sold at \$1 00. These, however, do not entitle the buyer to a seat.

Mr. Barnum has made a new engagement with Jenny Lind since her arrival here, and now the net proceeds of each concert are divided between the two parties. Miss Lind gave all of her portion of the proceeds of the first concert, amounting to about \$10,000, for charitable purposes, in this city. She has decided to set apart the entire profits of her concerts in America for the purpose of establishing free schools in her native country, Sweden. What more noble act could she do for her fatherland?

No artist ever visited America who created such a universal excitement as that produced by the appearance of Jenny Lind. Her enchanting powers as a singer, with her amiable traits of character, and such generous-hearted benevolence, have already won for her the praise and admiration of every one.

After giving six concerts in this city, Jenny Lind proceeded to Boston, where she will remain to give two or three concerts, and then return to New York again.

The first ticket for her concert in Boston sold for \$6 25 00.

**DEATH OF REV. DR. JUDSON.**—This widely-known and devoted missionary died on the 12th of April last, on board the French brig *Arioude*, bound to the Isle of Bourbon. For some time his health had

been failing, and at the time of his death he was on a voyage for his restoration.

He was among the first missionaries sent out by the American Board. He arrived in Calcutta in 1812. In consequence of his studies on the subject, during the voyage to Calcutta, he was led to change his opinions in regard to baptism, and he connected himself with the Baptist denomination, and selected Burmah as the seat of his future labors. In that field he has successfully labored for a period of nearly forty years.

He was living with his third wife at the time of his death. She was Miss Emily Chubbuck, the well-known Fanny Forester.

**CALIFORNIA.**—The bill has at length passed Congress, and been signed by the President, admitting California into the Union as a state. There are now *thirty-one* states.

**THE NORTHERN BOUNDARY OF TEXAS** has been fixed at 36° 30' north latitude, from the Indian Territory to the 103d degree of longitude west from Greenwich; then to follow that meridian down to the 32d parallel of latitude; thence due west to the Rio Grande, which river bounds Texas on the west.

**NEW MEXICO** is a new territory, and includes the country on the east side of the Rio Grande, lying north and west of the northern boundary of Texas.

**UTAH.**—That portion of the territory acquired by the United States from Mexico, lying westward of New Mexico and east of California, including the Great Salt Lake region, is organized into a territory, and called Utah.

**DEATH OF LOUIS PHILIPPE, EX-KING OF FRANCE.**—Louis Philippe died in England on the 26th of August last. He was in the 77th year of his age.

**THE QUICKEST TRIP YET.**—The United States mail steamship *Pacific* arrived in New York, on Saturday, the 21st of Sept., having made her passage from Liverpool in *ten days, four hours, and forty-five minutes*.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

EDWARD OSBORNE.

BY MISS ELIZA A. CHASE.

EDWARD OSBORNE sat idle at his desk, his pencils and drawing-book before him, when his teacher approached him, saying, "How does it happen, Edward, that you have so many unfinished pieces?"

"Oh, I am so tired of these drawings; I do not want to finish them; I would like something new."

"This is what you have been telling me for a long time; but new copies become old to you before you have finished them. This is a bad habit, Edward, and I wish you would resolve, from this moment, to conquer it. I now request you to commence with the first unfinished drawing and complete it, and so continue until your neglected work is finished."

"But, Miss Grey, these are so difficult, and they are not handsome either. I wish you would let me take a new copy."

"No, Edward, I can not. This bad habit is gaining on you. It results from a lack of energy and perseverance, and you can overcome it if you try. Resolve never to undertake a thing you are incapable of performing, but persevere in doing whatever is right for you to do."

"Oh, Miss Grey, if you would only let me leave these common things and draw that beautiful mountain sketch of yours."

"No, Edward; I must deny you this. I remember when those common things, as you term them, were once your admiration. That bridge, which you turn from with such dislike now,

was, a few days since, the object of your highest praise. You would leave every thing to finish it; but here it is just sketched, and no one part complete. You know my decision. Not another piece can you commence until all these are finished, so take your pencils and I will assist you."

In no very gracious mood Edward commenced his work, and the result of course showed a lack of care and attention.

Here was the key to Edward's character. Though in other respects an amiable boy, this one trait, like an unseemly scar, marred the beauty of the whole; and when he became a man, there was never a better illustration of the old adage, "Just as the twig is bent the tree is inclined."

In his occupation as a farmer, he rarely ever remained all day at one piece of work. He would commence his work, and after a few hours something else would attract his attention, and another piece must be begun. While others around him were doing well, he was constantly losing ground; and coming to the conclusion that farming was not the business for him, he sold his farm and opened a dry-goods store.

When the novelty of his new place was worn off, the same habits returned; his business became irksome; his books were unposted; and at length, convinced that he was not yet in his proper place, he disposed of his goods and entered the office of a physician as a student of medicine.

Alas for poor Edward! This was the most unfit of all places for him. His desultory habits had rendered him incompetent to pursue that course of close investigation so necessary for a physician, and after some six months' study, mingling anatomy with physiology, and therapeutics with hygiene, he concluded medicine was not the right study after all.

The high-wrought tales of California pleased his ear, and gathering the wreck of his once ample fortune, he started for the ultimatum of his hopes—the gold mines of the western Ophir.

Reader, this tale is no fiction; it is a plain relation of facts. Its moral is obvious: it teaches us that if we would succeed in life, we must be energetic, industrious, and persevering, and that the foundation of such a character must be laid in youth.

### THE MUSKETO.

**T**HOUGH the Musketo is so common, and its habits so well known that a description would seem needless, yet there is much which is interesting connected with its history, and the manner in which it comes into life, that is not so familiar to all. For this history, which we have here endeavored to give, we are principally indebted to "Life in the Insect World," and "Comstock's Physiology."

The Musketo passes through all those wonderful changes which are common to insects. Although its life, after it has acquired wings, lasts but a few weeks, the same care is taken to preserve its existence, and the same skill displayed in its formation, as we see in that of larger and longer lived animals.

The mother lays her eggs on the surface of the water in stagnant pools, ditches, and marshes. She does not drop them in one by one, in which case

they would sink to the bottom and be lost, but fastens them firmly together with gluten; she forms them into a complete boat, beginning at the stern and going on regularly until her work is finished.

She understands boat-building better than we do, in some respects, as her little boat will not fill with water, and can not be made to sink.

A naturalist, determined to prove this, placed half a dozen of them in a tumbler half filled with water, and then holding a quart bottle a foot above them, poured a heavy stream upon them. Although this treatment was so rough as actually to throw one of them out of the glass, the remaining five continued to float, without a drop of water in them. They were afterward pushed to the bottom of the glass, but immediately came up, apparently as dry as before.

Each of these boats contains from two hundred and fifty to three hundred and fifty eggs, which are soon hatched, the grubs issuing from the lower part.



FIG. 1. of the insect in its larva state.

Soon after they are hatched, they may be seen floating on the surface of the water, swimming about, generally with their heads down and their tails up, having in the latter a sort of funnel-shaped tube for breathing. Figure 1 represents a magnified view of the insect in its larva state. In this state they live upon those very minute animals which are always found in water, and which are so small that they can not be seen with the naked eye, although they afford food to a great number of insects. They are called *animalcules*. The Musketo catches these, and conveys them to its mouth by means of little hooks attached to its head.

After existing for a short time in the state of a worm, it changes its

skin and becomes a chrysalis. In this stage of its existence thousands may be seen during the summer and early autumn months in every stagnant pool, also in rain water that has been standing for a few days. During this period it takes no food, but a plentiful supply of air seems to be indispensable; hence it lies coiled up, and floats on



Fig. 2

the surface of the water, but unrolling itself and descending to the bottom when disturbed. In this state they are often known as "wigglers." This form of the insect is seen in Fig. 2.

When the proper time has arrived for it to leave the water and take its place among the inhabitants of the air, it stretches itself out at full length, bursts its skin at the head, and drawing itself out with its wings closely folded around it, it raises its head, and using its skin, which is still attached to the lower part of the body, as a boat, begins to float to land.

Now the condition of the little adventurer is critical and perilous in the extreme. He is no longer an aquatic animal, but is suddenly transformed into an air-breather. His former days have all been spent as a sailor, but now he has turned landsman; perhaps far from the shore, and having no other boat but his own skin, and with neither sail nor oar for that, as he has yet no use of either legs or wings.

If at this dangerous moment a little breeze comes on, it proves a dreadful hurricane to the poor animal; for if a



Fig. 3

drop of water gets into his little boat, or a puff of wind blows it over on its side, it may instantly sink, and carry the insect down with it. This hazardous situation is shown by Fig. 3,

which exhibits a magnified picture of the Musketo taking its departure from the water.

Reaumur, who saw every thing which nature exhibits with respect to this insect, speaks of this perilous moment in the following language:

"When the observer perceives how much the prow of the little bark sinks, and how near its sides are to the water, he forgets for the moment that the sailor is an insect which at any other time he would destroy; nay, he becomes anxious for its fate, and the more so, if the slightest breeze plays on the surface of the water; the least agitation of the air being sufficient to waft the creature with swiftness from place to place, and to make it spin round and round.

"The body folded in its wings, bears a greater proportion to the little skiff than the largest mass of sail to a ship; it is almost impossible not to dread lest the insect should be wrecked; once laid on its side on the water, there is no escape. Generally, however, all terminates favorably, and the danger is over in about a minute." Then, spreading its wings, it goes whirring and whizzing about in the air, as if it had never known any other element.

The little sucker or bill of the Musketo is finer than a hair, and has inclosed within it five separate lancets, several of them having teeth on one side. These lancets can not be seen, without the aid of a powerful microscope, and it would of course be utterly impossible for the hand of man to form any thing so small; yet they are all fashioned with the most exact nicety. With these it pierces the skin, and then throws a poisonous fluid into the wound; it is supposed for the purpose of thinning the blood, and rendering it easier to suck.

Musketos require very little food, and it is believed that when they can not get blood, they are satisfied with



sucking the juices of flowers and fruits. It is said by some that the male Musketo never tastes blood.

In marshy places Musketo are often very abundant, and have sometimes been seen rising in columns from four to five feet in width, and to the height of forty or fifty feet; looking so much like thick columns of smoke, that persons at a little distance have given the alarm that there was a fire in the neighborhood.

They are, of course, very annoying to the inhabitants, who are obliged to keep their doors and windows closed to prevent their intrusion into their houses.

In many places the Musketo are so very annoying, that "musketo-nets," or "musketo-bars," as some call them, are placed over the bed as a protection from them during the night. These are made of a thin cloth resembling very coarse lace, and are usually fastened over the bed-posts, two or three feet above the bed, covering the whole of it, and hanging down around the sides, thus excluding this annoying insect.

### THE EARLY HOME.

BY J. H. HANAFORD.

Oh, give me back my home, mother,  
My early, joyous home,  
The scenes I loved in childhood's dawn,  
Ere taught abroad to roam.  
Oh, those were sunny hours, mother,  
The gay and blithesome hours,  
When free I ranged the mountain side,  
Or strayed in fragrant bowers.

Oh, give me back my "cot," mother,  
My quiet, rural cot;  
Though rustic forms are gathered there,  
It is a lovely spot.  
I'd stroll among its trees, mother,  
Those shady, waving trees,  
And climb among their verdant boughs,  
And catch the cooling breeze.

Oh, can I not return, mother,  
In joy again return,  
Where early friends may love me still,  
And o'er my sorrows yearn?  
The joyous birds oft sing, mother,  
In sweetest strains still sing,  
And gayest flowers are blushing there,  
In all the bloom of spring.

Oh, give me back my toys, mother,  
My girlish, cherished toys;  
'Twill sweeten now life's bitter cup,  
To sip again those joys.  
Those pleasant hours have sped, mother,  
Like youthful bloom have sped;  
The thrilling scenes of boisterous mirth,  
And deep-loved ones have fled.

This spacious mansion 's gay, mother,  
In all its features gay;  
Its gleaming turrets far on high,  
And with the clouds they play.  
But oh, 'tis not my home, mother,  
My child-loved, shaded home,  
Where glad I sat and sweetly mused,  
Ere fortune bade me roam.

The birds that round me sing, mother,  
In plaintive accents sing;  
I seem to hear a saddened air,  
While through the boughs they spring.  
But sweeter lays were those, mother,  
Those joy-tuned, warbling lays,  
Which near my infant couch arose,  
And cheered my early days.

Though merry ones may smile, mother,  
In joy and glee may smile,  
Or gathering round with soothing tones,  
My lonely hours beguile,  
Yet still within my heart, mother,  
This bleeding, yearning heart,  
There is a harp forever mute,  
Untouched by soulless art.

Oh, give me back my home, mother,  
My only, dearest home,  
That loving ones may soothe me still,  
And dissipate this gloom.  
Oh, let my aching head, mother,  
When all my toils are o'er,  
Repose beneath that rural shade,  
Where grief can come no more.

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Natural History.

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THE CRANE.

BY HENRY WILSON

**B**IRDS are all included in two great classes, called **LAND BIRDS** and **WATER BIRDS**. These classes are again divided into others. **WATER BIRDS** are divided into *Waders* and *Swimmers*. The *Waders* have long legs, long necks, and many of them long bills. To this class belong the Crane, Stork, Heron, Bittern, Snipe, and some others.

The Crane is one of the most remarkable of this tribe. He has long legs, a long neck, and a long and slender bill. His toes are four in number, and connected by a membrane as far as the second joint. This bird lives chiefly on fish, which it catches by striking them with its bill; but it also eagerly devours frogs, lizards, mice, and worms.

The Crane is found on the American continent, but it is a native of the northern parts of Europe and Asia, and wandering in the winter to the southern parts of Europe, Asia, and Africa. It frequents marshes, and for such a residence is admirably adapted.

He is about four feet high, and three and a half feet in length from the point of his bill to the tail. The bill is from four to six inches long, and yellow. The feathers are chiefly of an ash color, but the legs and the quill feathers are black. Long flowing feathers arise from his back, and hang over the tail, giving him an air of elegance.

This bird selects the most solitary and dreary swamps, and there, amid the bushes and tall grass, builds its

nest of rushes and sticks, and rears its young. It lays only two eggs.

Cranes perform long journeys on the wing, sometimes reaching a distance of more than one third of the entire circumference of the earth. Early in the spring they leave the southern parts of Asia and Africa and fly northward, even as far as the cold regions of Greenland and Iceland. In autumn they return again to the warmer climates of the south.

During these long journeys they fly at an immense height, and each flock takes the form of a letter V, and moves with the angle forward. One of the number leads, probably selected on account of age or experience. Though they sometimes fly so high in the air that they can not be seen by the naked eye, the trumpet-like voice of the leader may be heard, and even the response by the company.

When wounded, they do not try to escape from the hunter, but patiently await his approach, and boldly attack him. And such a contest is not always safe for the man. Their bills are sharp, and with their long necks they are enabled to strike a fearful blow.

If taken young, this bird may be tamed and kept in the barnyard. There it will associate with the poultry, and even become their leader and protector.

When a flock of Cranes alights to feed or rest, one of their number acts as sentinel, and gives an alarm if an enemy approaches, or any danger threatens. If started, and obliged to take wing, they make a sharp, piercing cry, which may be heard two or three miles; but when once fairly on the wing, high in the air, the tone is changed.

There is a lovely trait of character in these birds, and one from which children may learn a valuable lesson. If a Crane becomes old and feeble, he

is supported and cherished with the utmost care and zeal by the young. Here is filial love and kindness, worthy of a human being.

### I CAN'T—I'LL TRY.

HERE can not be found, in the English language, two other phrases so simple and so frequently spoken as those at the head of this article, which have been productive of results more widely differing. Many are the incidents in which the success of enterprises as well as of individuals has depended on the simple resolution expressed by "I can't," or "I'll try." The one is never attended by success; the other seldom fails to accomplish it.

At the battle of Lundy's Lane, near Niagara Falls, during the last war with Great Britain, the English had possession of a height which commanded the American army, and their artillery caused dreadful slaughter among our troops. At this crisis General Ripley, the commander of the American forces, rode up to Colonel Miller and asked him "Can you take possession of the enemy's battery?" "I'LL TRY, SIR!" was his laconic reply.

He *did* try. He put himself at the head of his men, marched up the hill, and charged the enemy, who could not withstand his impetuosity, and the American flag soon waved from the summit of the height.

The Earl of Chatham affirms that most of his greatness originated from a little expression which his father was in the habit of using to him. "I was naturally of an indolent disposition, and when my father requested me to do any thing, I often answered, *I can't*. To this he would reply, 'Try, my son,' and trying has made me all that I am," said this noble earl, once England's ablest statesman.

Thus it will always prove, when a

thing, not in itself impossible, is undertaken with a firm determination to succeed. He who engages in a just cause, and inwardly resolves to try with perseverance, will finally succeed, in nine cases out of ten, even though obstacles present themselves that would discourage a less resolute spirit.

He who tries may succeed; but he who is contented with "I can't," will ever be found far in the rear, slowly and ignominiously dragging along the journey of life. He will always be at the foot of the Hill of Science, and seldom accomplish any thing he undertakes.

Is he a young farmer, or mechanic, and exclaims "I can't," at each improvement suggested, or obstacle to be encountered? He will live and die unknowing and unknown. Has he a profession? "I can't," will ruin him; but "I'll try," will lead him nobly onward to success and renown.

Perhaps there is no class of persons more seriously affected by the expression, "I can't," than students. It needs no gift of prophecy to foretell that the student who shrinks from his lessons, and exclaims "I can't," will never rise above the humblest grade of scholarship. His career will not be one of usefulness and honor, when he has left the studies he so much hated, without *trying* to secure them.

It is not possible for the mind to receive instruction profitably without exerting its own energies. The mental field needs plowing to fit it for the reception of the mental seed. Teachers and books are of no avail unless the pupil *will try*.

Are you a scholar, and would you drink deep at the fountain of knowledge? Would you be fitted for the duties of life which await you? Then let your watchword be "I'LL TRY." Remember this lesson;

"If at first you don't succeed,  
Try, try again."

## EZEKIEL'S CONVERSATIONS WITH THE CHILDREN.\*

### JACK WITH A LANTERN.

JANE.—Well, Ezekiel, I have been reading about a traveler who was benighted on a journey, and who, thinking he espied a light burning in a cottage, followed that light until he walked into a marsh; and then he recollected that *Jack with a lantern* was often seen about those parts, and became much afraid; now who is *Jack with a lantern*?

Ezekiel.—Well, Jane, you cause me to smile by asking that question. When I traveled in Europe, I used to sit beside the hearths of the country people and listen to their stories, and many times did they rehearse their adventures with *Jack with a lantern*, *Will with the wisp*, *Spunkie Willie*, or *Ignis Fatuus*, as it is called.

George.—I should like to hear those stories.

Frank.—And so should I.

Ezekiel.—Well, they were generally pretty much alike in their nature. A simple countryman, passing through a church-yard at night, would see this light, and getting scared he would run away, but the light would follow him.

Another would get benighted on a lonely moor, and run toward this deceptive light, supposing it to be a dwelling, when it would dance before him and lead him on until he stumbled into a bog or marsh.

Jane.—Well, but I should like to know the cause of this light.

Ezekiel.—I shall now explain it to you. It is produced from a gas called *Phosphureted Hydrogen*, which is a substance called phosphorus combined with hydrogen gas.

\* This conversation is from Burritt's Christian Citizen, an interesting weekly paper devoted principally to Peace principles, published at Worcester, Mass. Ezekiel is holding some very instructive conversations with children through the columns of this paper, and we intend to present several of them to our readers.

**Frank.**—I notice one thing about those hard words that you sometimes need to use, and that is that you must explain their meaning, and that makes us know more and think more. Now, what is *phosphureted hydrogen*?

**Ezekiel.**—Well, Frank, I shall explain what *phosphureted hydrogen* is, as well as I can. Phosphorus is a pale, amber-colored substance, somewhat resembling beeswax in appearance. The word comes from two Greek words which mean to *produce* or *carry light*. This substance is contained in all living bodies.

**George.**—I have seen putrid fishes sparkling at night—was it phosphorus that shone?

**Ezekiel.**—Yes, that is spontaneous phosphorus; but the phosphorus that I described is obtained by heating bones to a white heat, by which means all the animal matter and charcoal are consumed, and a substance called phosphate of lime is left behind.

**Jane.**—What is phosphate of lime?

**Ezekiel.**—It is phosphorus mixed with oxygen gas and lime. When sulphuric acid is added to this, and the whole is heated, the lime unites with the acid and the pure phosphorus remains.

**Frank.**—Is phosphorus of any use to any body but chemists?

**Ezekiel.**—Yes; that part of a lucifer match which ignites when rubbed is phosphorus; and 250,000 pounds of it are used every year in the city of London, alone, in the manufacture of these matches.

**Jane.**—Well, is Jack with a lantern phosphorus?

**Ezekiel.**—Jack with a lantern is a light that arises from the gas of putrefying animal and vegetable substances, especially from decaying fish. It is impure *phosphureted hydrogen*, which bursts into flame whenever it mixes with the air or with pure oxygen gas.

**Frank.**—Will not pure phosphureted hydrogen ignite of itself?

**Ezekiel.**—No, Frank; it must be impure or it will not burst into flame.

**George.**—If this gas rises from all dead bodies, then it must be that which causes the smell in burial places.

**Ezekiel.**—Yes, and that is the reason that Jack with a lantern is sometimes seen there, too.

**Jane.**—Do roads pass through church-yards in the old world?

**Ezekiel.**—I have walked through a church-yard in the very heart of the great city of London; and the common way often passes through those places of the dead in Scotland, England, Ireland, France, and Italy.

**George.**—What do you mean by *Ignis Fatuus*?

**Ezekiel.**—It means the fire of fate, from an old foolish idea that it predicted death to those who followed it.

**Frank.**—So it did, I think, if it led them into marshes.

**Ezekiel.**—The truth is, that the persons who follow it cause it to move by the forward motion they impart to the air, and those who run away from it make it follow them from rushing against the air and causing a current which attracts the light, inflammable gas after them.

**Jane.**—Is this the only thing that produces Jack with a lantern?

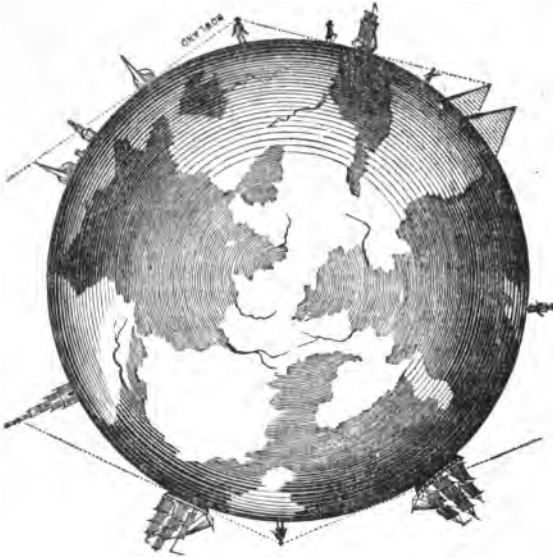
**Ezekiel.**—You may call all the firebugs that flit about at night Jack with a lantern, for they produce the very same appearances.

**Frank.**—What people call the *Ignis Fatuus*, *Spunkie Willie*?

**Ezekiel.**—A nation who possess many curious tales of strange spirits, I mean the Scotch.

**George.**—I should like to hear some of their old stories.

**Ezekiel.**—Well, some time I may tell you about their brownies, kelpies, bogles, fairies, etc.; but I wish to retire now, so good night.



### ROTUNDITY OF THE EARTH.

**F**OR many ages mankind supposed the earth to be a vast plain, bounded on all sides by the sea and sky. They supposed the sun, moon, and stars to be at no great distance from the earth, and that these moved daily from east to west.

Though this was the belief of the great mass of mankind, there were a few attentive observers of the motions of the heavenly bodies who thought the earth to be round, like a ball; but they dared not tell their views, except in secret, lest they should be persecuted, and even endanger their lives.

It is only about three hundred years since the true theory of the figure and motion of the earth began to be generally received. A few years previous to that period a person would have been in danger of imprisonment for life, or even of being put to death, had he taught the opinion now held concerning the shape of the earth.

We learn from history that the learned Spengelius, of Upsal, in Sweden, was burned at the stake because he taught

that the earth was round. Only a little more than two centuries ago, the celebrated Galileo was confined in prison because he proclaimed that the earth turned on its axis, and moved around the sun.

Nicholas Copernicus, who was born at Thorn, in Prussia, in 1473, was the author of the theory of the Solar system, which is now received by all enlightened nations. But he was threatened banishment and even death, if he would not deny his belief, so prejudiced by ignorance were the minds of that period. Yet truth prevailed, and in honor of its author the theory is called the Copernican system.

How the ancients first became convinced that the earth was round we have no means of knowing; but we will here give a few facts and observations which prove it to be a globe.

1. Persons have sailed around the world, and come back to the place from which they started, as a fly would do by crawling around an ap-

ple. But, since there are so many continents and islands to obstruct a direct passage, it may not appear plain to some how sailing around the world will prove any thing about its shape.

That this may be better understood, we will suppose a vessel to start from Rio Janeiro, in South America, and sail directly east. In a few weeks it would come to the western coast of Africa. Now navigators carry with them a compass and other instruments by which they can always tell the course they are sailing, and how far they move in any direction.

On arriving at the coast of Africa, the captain changes the course of his vessel and sails south until he has passed the Cape of Good Hope; then he goes east again till he gets beyond Africa, when he turns toward the north and sails as far as he had gone south, which will bring him in a direct line east of his starting place.

He will now continue his course eastward till coming to Australia; and after sailing around that, in a like manner, to a point directly east of Rio Janeiro, will again proceed in an easterly direction, and at length arrive at the western coast of South America. Then, by sailing south, around Cape Horn, and going north again, he will arrive at the place from which he started.

It is by thus making allowances for the land which is sailed around, that the navigator knows he has continued in one general direction. Once it was considered an extraordinary act to have sailed around the world, but now many persons return every year from such a voyage. The time thus required is from one to two years.

2. When a ship goes out to sea, we first lose sight of the hull, or body of the ship; then of the sails and lower rigging, and lastly of the masts. When a ship approaches the land, the top of the mast is seen first, then the lower

parts of the vessel gradually appear. If the earth were an extended plain, the largest parts of the ship, when leaving the shore, would be seen last, and on approaching land these would be seen first.

If a person stands on the deck of a vessel when leaving the shore, the land and less elevated objects are first lost sight of, and the steeples and highest parts of all objects are seen last. Now these appearances are the same in every part of the world, which man has visited, hence it follows that the earth is regularly curved on all sides.

3. When the moon is eclipsed, it is darkened by passing through the earth's shadow. This shadow, as seen on the surface of the moon, is always of a circular form, such as a round ball would make.

4. If we stood on the equator, the north star would be in the horizon, where the earth and sky seem to meet. On going twenty degrees to the north, this star would appear to have arisen twenty degrees above the horizon. If we proceeded forty-five degrees north, this star would appear forty-five degrees above the horizon, and so on. The reverse would be the case on going south again. Then the stars in the north would sink and new ones rise in the south.

These changes prove that the earth is round from north to south, as they could not occur were it otherwise. The first mentioned observation proves that the earth is round from east to west; the second shows its general convexity; and all combined afford convincing proofs that the earth is round like a ball.

—♦—

FIRE is a good servant, but a hard master; master your *passions*, and they will *serve* you.

The mind makes the man.

## For Children.

'To aid the mind's development, and watch  
The dawn of little thoughts.'

### THE SPIDER.

ONE day Jo-seph's mam-ma said to him, "What is that you set your foot up-on just now?"

"It was on-ly a spi-der, mam-ma."

"On-ly a spi-der! and have you kill-ed it?"

"Yes, mam-ma; it was of no use, and so it might as well be dead as a-live."

"Had it ev-er done you any wrong, or giv-en you of-fense in any way?"

"No, mam-ma; but I did not like to see it creep-ing a-bout the house, and do-ing noth-ing from day to day but catch flies. I am sure spi-ders are of no use.

"And I have seen him watch-ing a lit-tle fly for a long time, and at last he caught it and ate it up.

"Now why should he not let the poor fly live, as well as him-self?"

"That is his food, Jo-seph, and such food as God taught him to find, hence it must be right that he should thus kill and de-vour the flies.

"I am ver-y sor-ry as well as grieved to hear you speak in this man-ner, I did not think you were so cruel.

"How dare you say that any of God's crea-tures are of no use? Suppose, now, some great man were to take a-way your life, and to say,

"'Oh, he was on-ly a lit-tle child, he was of no use, there-fore he might as well be dead as a-live, would that be right?'"

"No, mam-ma; but of what use can a spi-der be?"

"Spi-ders are ver-y use-ful, Jo-seph; for as their food con-sists of in-sects, they de-stroy ma-n-y crea-tures that would not on-ly an-noy but in-jure us.

"Be-sides, they them-selves are the food of ma-n-y lit-tle birds, which feed up-on in-sects; so that you see they are not use-less.

"I hope, Jo-seph, I shall not have to re-prove you a-gain for kill-ing any thing be-cause you think it is of no use.

"Try to keep in mind these words, 'God has made nothing in vain.'"—*Selected.*



## AUNT ELIZA'S STORIES,—No. VI.

## PICKING NUTS.

**T**HE sweet month of October is here, and the time is at hand when little children as well as little squirrels will be picking the nuts that fall from the brown trees.

The white frost will come and with his glistening key unlock the prickly bur of the chestnut and beechnut; and even the walnut will throw off its fading green cloak, and show its white and shining face.

Soon a strong wind will come, and the bare old trees will shake as if they had a fit of the ague, and patter, patter on the dry leaves, the nuts will fall like drops of rain.

Here and there hurries the squirrel, up and down, round and round, so quick you can scarcely catch a glimpse of him, looking as if his little jaws were half cracked open with the huge nut he is carrying in his mouth.



Here he comes for another, and what a chattering he makes. Do you hear him?

He seems to say, "Never give up and say I can not learn this lesson, it is so hard, little boys and girls; why, I do not believe it is half as hard as these hickory nuts I am gathering, and yet I must carry them off to my cellar, for winter is coming and my children will be hungry."

"You can not guess what piles and piles of sheets, and blankets, and quilts made of dry leaves and soft moss I have stored away in my wardrobe, and the muffs and tippets for my children, it would surprise you. We will see when cold winter comes growling along, how nicely we will live in our snug home and what fine times my family will have."

"So work away little children, no pouting, no scolding, but frisk about and study all you can, and do it with a smile too. Let your eyes sparkle; but I must not stand here talking to you. Now do not throw stones at me, little boys, and please keep your dog still. He barks so, it makes me quite nervous."

Now little children, do remember the squirrel's chattering; let him get his share of nuts, for the kind Creator has made enough for the little squirrels too.

I recollect when I used to gather nuts, that I looked often at the distant Catskill mountains

and wondered what made them look so blue, and then I thought they must touch the sky and be colored by it.

One afternoon a large party of us went to the woods where the nuts lay strewed over the ground. O the laughing and talking and picking, till at length our baskets were full, and it was not near sun-down; then we began to pick the bright red partridge berry, and wish we had more baskets that we might pick more nuts.

"I'll tell you what we can do," said little Carrie Lee. "We are almost to the Widow Parker's, and Ellen is sick and can not gather nuts, let us carry her some, and come back and pick more."

"O yes, let us carry our nuts to Ellen Parker," said the rest.

"Yes, and some, one else," said Willie May. "There is poor little Edgar Sanford, whose foot was crushed in a mill the other day. He can not walk any more it is feared; let us carry him some, too."

"We will divide them between Ellen and Edgar, and come again and pick for ourselves," said the others.

So away we went and gave Ellen a part, and she thanked us so sweetly, and her mother told us she should always remember our kindness to her child.

But little Edgar! We could not help weeping to see him. The doctors had been obliged to take his foot off the day before, but he looked very patient and seemed glad to see us; and when Willie May told him what we came for, he grasped his hand, and the tears rolled down his face, but he could not speak a word.

We went home that night without any nuts, but felt happier than all the nuts in the world could make us; for we had done a simple but kind deed that had made others happy.



#### GRAPES AND RAISINS.

**G**RAPES grow on vines. They hang in bunches, or clusters, as you see them in these pictures.

They are usually about the size of very large cherries. In some countries they grow as large as plums.

If you will look on the map of Asia, you can find a country called Syria. This is often called Palestine, or the Holy Land.

In that country the largest and best grapes in the world have been raised. There, a single cluster will often weigh twelve or fifteen pounds.

Now, by looking on the map of Europe you may find Italy, France, and Spain. In all of these countries there are many large vineyards.

A vineyard is a large garden or yard where grapes are raised. Once or twice in the year a plow is used in the vineyard, to loosen the ground and free it from weeds.

In this country vineyards are not so common as in Europe and Asia. But grapes are raised here in small yards in our cities and villages, as well as in gardens in the country.

Grapes also grow in a wild state in great abundance in many parts of the United States. The vines may be found climbing on trees, rocks, and fences.

Wild grapes are not as sweet as those raised in gardens and yards. The best American grapes are called Isabella, and Catawba.

Grapes are ripe during the month of October. Wine is made from the juice of grapes. But there is not much wine made in this country.

Raisins are dried grapes. The grapes are left on the vines till

they are perfectly ripe, then picked off and dried.

Some are dried in the sun and some in an oven. When dried in the sun, the raisins are best.

Raisins are brought to this country from Europe and Asia. They are packed in barrels, boxes, and jars.

The best raisins come in jars and boxes weighing about twenty-five pounds each.

#### WEEDS AND FLOWERS.

**Y**OUNG Willy Thompson had lived all his life in a large city, and had only seen the flowers growing in the pots and small garden beds.

When he was ten years old he was sent to the house of an uncle who lived in the country far away from home.

On the morning after his arrival, he walked out with his uncle to look at the many objects so attractive to the eyes of a city lad.

The chickens, the ducks, and the geese, the cows and horses, the sheep and oxen, all were looked at and admired.

"Come, Willy, let us now go into the garden and see the flowers," said the kind uncle, after he had shown him all the curiosities of the barn-yard. And Willy ran gladly after his uncle.

"Oh, what a beautiful flower!" said Willy, as he stooped down and was about plucking the blossom of an offensive weed.

"No, no, Willy," said his uncle, "don't touch that! It is not a sweet flower, only a vile weed. Come along with me, and I will show you plenty of real, beautiful, sweet-smelling flowers."

So Willy went on with his uncle and soon came to the garden, filled with the loveliest flowers of the season.

"Now, my boy, gather as many as you please," said his uncle; and Willy soon had his hands full of the sweetest flowers in the garden.

As they went back to the house, they passed the gay weed Willy had stopped to pluck.

"But why isn't that a sweet flower, too, uncle? It is very pretty."

Willy's uncle stooped down and pulled the blossoming weed, and handing it to the boy, he said—

"Smell it." Willy smelled it, and then threw it quickly on the ground.

"Now smell this rose."

"Oh, how sweet! But that weed smelled very bad."

"You now see that there is some difference between a flower and a weed. One is not only

beautiful to look upon, but its quality is different, and that quality sends forth a delicious odor.

"As you grow older, my dear boy, and enter into the world as a man, remember how you were once deceived by a weed.

"Do not place confidence in every one who puts on a show of goodness, who presents a beautiful and attractive exterior, but judge by the odor that proceeds from him; that is, by the acts that show forth his true character."—*Selected.*

### I'LL NEVER USE TOBACCO.

"I'LL never use tobacco, no!

It is a nasty weed!

I'll never put it in my mouth,"

Said little Robert Reid.

"Why, there was idle Jerry James,

As dirty as a pig,

Who smoked when only ten years old,

And thought it made him big.

He'd puff along the open street

As if he had no shame;

He'd sit beside the tavern door,

And there he'd do the same.

He spent his time and money too,

And made his mother sad;

She feared a worthless man would come

From such a worthless lad.

Oh no! I'll never smoke or chew,

'Tis very wrong indeed:

It hurts the health, it makes bad breath"

Said little Robert Reid.

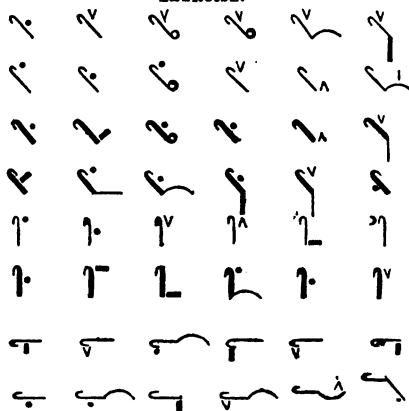
*Cousin Ann's Stories.*

# Phonography.—Lesson 6.

In our last lesson we gave tables of the L-hook and R-hook series. When writing these characters, the hooks are always made first, and the stems are struck, as explained in the first lesson, page 28, without taking off the pen. In reading these signs, it must be observed that the hooks of *pl*, *tl*, *pr*, *tr*, etc., are not *l* and *r*, and the stems *p* and *t*, which would make them *lp*, *lt*, *rp*, *rt*, etc., but that the characters as a whole represent the several combinations of the L and R-hooks.

The vowel signs are affixed to the stems in the same manner as if the hooks were not used.

## EXERCISE.



Words, contained in the first and last lines of the preceding exercise.

1st line.—pray, pry, price, prize, prime, pride.

2d line.—clay, claim, clue, clime, clown, clap.

*Exercise to be written in Phonography.*

A close and cloudy day. The barometer sinks in falling weather. When the flowers are in bloom, and the sky clear, I will cull a bouquet for you. Pride goes before a fall.

When the *s* precedes either the L-hook or R-hook series, the circle is made smaller and more oval than usual, and is included within the hook, except for the straight stems of the R-hook series. These are written without a hook, on the opposite side of the stems from the position of the circle on the simple stems, as *sp*—*s* without the R-hook; *supper*—*s* with the R-hook.

In vocalizing these combinations, when the vowel comes after the *s*, and before the *l* and *r*-hook, it is placed before the *l* or *r*-hook sign; and

when it comes after all three consonant signs in reading, it is written after all of them. Examples:

*suffer*, *sickle*, *stray*, *settle*, *civil*, *stream*, *straw*, *spree*, *spray*.

For the sake of convenience in writing, the *vr* and *lr* characters are sometimes made without the R-hook, but in this instance the *lr* is made heavy, to distinguish it from the simple *l*. These are illustrated by the following examples: *vr*,

*lr*.

It has already been seen that the beginnings of the simple stems are occupied by the L and R-hooks. Now, since the hooked stems are made with nearly the same facility as the simple ones, the ends of the stems also receive hooks. These signify the addition either of the frequent sound *n*, or of the common termination *shn* (tion). The use of the hook for *shn* is arbitrary; but the use of one for *n* is less so, because the preceding consonant frequently coalesces with *n* to form a compound sound without an intervening vowel, except a slight sound of the natural vowel; as open, pronounced *opn*.

The *n*-hook is made at the end of the stems, on the opposite side of the straight stems from the *s*-circle, and on the same side as the *r*-hook, as shown in the following examples. It is always made on the inside of the curves.

*jn*, *pn*, *rn*, *nn*, *sn*.

The *shn*-hook is made at the end of the straight stems, on the same side as the *s*-circle, and, like the *n*-hook, is always made on the inside of the curves, but of twice the size of the *n*-hook. Examples of the *shn*-hook: *bshn*, *dshn*,

*fshn* → *kshn*, *nshn*, *pshn*, *vshn*.

The *s*-circle is added to both the *n*-hook and *shn*-hook. It is formed to the *n*-hook by a simple circle on the straight stems, on the side occupied by the *n*-hook, and on the curves by making a circle within the hook. It is added to the *shn*-hook by turning the circle within the hook.

These stems are vocalized as if the hooks had not been used, but a third place vowel coming on the same side as the hook is placed outside of it, as in the following examples:

*pns*, *fence*, *passions*, *fashions*.

## Drawing Department.

Notices of drawing and leaf impressions received since issuing our last number.

The following-named pupils sent us drawings and leaf impressions from Miss Eliza A. Chase's school, Orangetown, Rockland Co., N. Y., viz.: Jane Maria Post, aged 13; Ellen Jane Blauvelt, 12; Martha Crum, 8; Matilda Cooper, 11; Margaret Ann Haring, 11; Catharine L. Blauvelt, 11; John H. Post, 11. We are happy to see that these pupils have made improvement in taking leaf impressions; but they should practice till they can do it well without diluting the ink; it is not too thick for use as obtained from the printer.

From the pupils of Miss Fidelia R. Harris, North Bergen, N. J.: Mary E. Morton, aged 10; Edmund Alvord, 12; Anna A. Morton, 7; Walter B. Alvord, 8; Sarah A. Berry, 12; Yearly Cooper, 9; Josephine Demott, 8; Sophia Green, 6; Cornelia J. Smith, 12. Your are improving—go on.

The pupils of Miss Cynthia A. Osborne, North Hempstead, L. I., have recently sent us another package of drawings; but as their names were published in the last number we omit them here.

Miss Ellen Alexander, aged 14, a pupil of E. H. Johnston, Cohoes, N. Y., has forwarded us some paintings in water colors. The rose was executed with the best taste. With practice and care you may learn to paint well, Miss A. We shall be pleased to receive more of your specimens.

William Battin, of Hanoverton, Columbiana Co., Ohio, has sent us a roll of Leaf Registers from his private press. We are pleased to hear thus from single individuals, as well as schools. Ohio must produce some large leaves, judging from the specimens sent us. Such "Hickory," leaves do not grow "in these parts."

From the pupils of Mr. Horace Warner, Branchville, N. J.: Susan Van Auken, aged 14; Elmira S. Crane, 12; Zillah L. Coursen, 12; Sarah Ann Owen, 13; Jane M. Van Auken, 10; Martha E. Van Auken, 8; John L. Van Auken, 12; John Smith, 12. Accompanying the drawings from these pupils were some very neat leaf impressions. Several of the pupils sent some water-color paintings.

We are always pleased to receive these specimens of drawing, painting, etc., from children; these tell us that they are cultivating a taste for the beautiful in nature and art. This, we know, is but a simple beginning, but great results come from as simple efforts at the outset. We hear persons remark, on seeing these simple efforts of children's drawing which are sent us, "If I had but enjoyed such inducements, and had had such copies placed before me to be excelled, when I was young, how highly I now should prize the advantages it would have given me. It would have laid a foundation for a taste of the true and beautiful, and cultivated habits of neatness, and observation of the forms of objects."

## Editor's Table.

### TO OUR PATRONS.

Six months have passed since we submitted to you the first number of *The Student* in its new dress. It has now visited you from month to month, and become a familiar acquaintance. To reach all of you, it has been borne to Maine and the Canadas on the North; to Texas and even South America on the South; and far beyond the Father of Waters on the West. We have labored to send it forth richly laden with that which is attractive and useful; it has been our aim to make it ever a welcome visitor to the family circle, and a valuable assistant in the school-room. If our efforts have proved successful, one object has been accomplished, and through that we trust some good has been effected.

Through your kind encouragement our circulation has increased much beyond our expectation, and we are stimulated by these approvals of our humble efforts to benefit the youth of our land, to still deserve your approbation, while we make greater exertions for placing *The Student* in the hands of the young in every portion of the Union. May we not ask you to favor us still more in our enterprise? You know *The Student*, and you can introduce it to your friends, and obtain from them an invitation for it to become a visitor among their children, also.

There are a few among your number whose term of subscription will expire with the present month; yet we fain would retain your acquaintance, and continue sending you our monthly visitor. But this is a matter for you to decide; as our terms are in advance, we shall discontinue sending *The Student* to those who have not paid for it any longer, until they inform us that they desire it continued.

Each year of *The Student* is divided into two volumes, for the purpose of accommodating subscribers who may wish to commence either in autumn or spring. Our next volume commences with November—being the season of opening winter schools in the country, and when the evenings have become so long that abundant time is afforded for reading, it is a most fitting season to subscribe.

N.B. *The Student* is stereotyped, and we can supply all subscribers who may desire them with the back numbers of the present volume.

## NOTICES OF PUBLICATIONS.

A TREATISE ON ENGLISH PUNCTUATION; designed for Letter-writers, Authors, Printers, and Correctors of the Press, also for the use of Schools and Academies. By JOHN WILSON, No. 21 School Street, Boston, Mass.; 12mo; pp. 216; price 75 cents.

We have never before met with any work on punctuation which gave us so great satisfaction as this. It supplies a desideratum which has long been needed. Those who have had much to do with printers and proof-readers know full well the absence of any system of punctuation among them. It is also a notorious fact that most authors leave the punctuation to printers; hence compositors punctuate to suit their fancy, as they may understand the article when setting it; the proof-reader marks according to his taste; and when the author gets his proof, he tries his skill upon it, so that between the three it not unfrequently happens that no system whatever is observed in the punctuation. But what renders the matter still worse is, the fancies of compositors are capricious, even if they can understand the writer; the tastes of proof-readers are often very dissimilar, the style for punctuation in each printing-office being usually unlike that of any other; and even the skill of the author is seldom guided by a complete standard. Hence the necessity of some comprehensive, practical, and thorough work on this subject, and such we believe the one here spoken of to be.

We have thought an attempt to prepare a treatise on this subject which would practically cover the whole ground, and one which any printer, proof-reader, and author might follow, would be nearly fruitless, but the work before us has convinced us to the contrary. Believing that it fully meets the wants on this subject, we cheerfully commend it to all for whom it is designed, and especially to proof-readers, writers, teachers, and students.

THREE YEARS IN CALIFORNIA, by REV. WALTER COLTON, U. S. N., Author of "Deck and Port." Published by A. S. Barnes & Co., 51 John Street, New York; 12mo; pp. 456; price \$1.25.

This work is written in a familiar, journalizing style, giving a description of California during a period of three years, from July, 1846—the time when the American flag was first raised there—up to October, 1849—when the constitution was signed. During Mr. Colton's residence in California he was Alcalde of Monterey, an officer possessing almost absolute sway over a territory of three hundred miles in extent. The record of the great variety of cases brought before him for legal decisions, gives great interest to the volume, and serves to throw much light on the true character of the native Californians. The work is emphatically a graphic picture of the new Eldorado, both before and after the discovery of the gold mines. It is illustrated with steel portraits of Captain Sutter, Thomas O. Larkin, Colonel J. C. Fremont, Wm. M. Gwin, G. W. Wright, and Jacob R. Snyder, besides several engravings of scenes in California life. It also contains the state constitution, with fac-similes of the signatures to that instrument.

THE ILLUSTRATED BIBLE. By the REV. INGRAM COBBIN, M. A. Nos. 5 and 6 of this work have been received. Each number is printed on excellent paper, beautifully illustrated. Twenty-five cents per number. Samuel Hueston, Publisher, 139 Nassau Street, New York.

THE LITERATI: *Some Honest Opinions about Authorial Merits and Demerits, with Occasional Words of Personality; together with Marginalia, Suggestions, and Essays.* By EDGAR A. POE. 12mo; pp. 607; price \$1.50. Published by J. S. Redfield, New York.

This work forms the third volume of the "Works of Edgar A. Poe," which have been brought out under the editorial supervision of Rufus W. Griswold, in conformity to a request made by Mr. Poe himself. The volume now before us contains a memoir of the author, by Mr. Griswold, but is principally devoted to brief reviews and criticisms of the writings of some seventy-five literary persons, principally Americans, and most of whom are living. These criticisms are written with all the characteristic boldness and independence of Mr. Poe.

ELEMENTS OF METEOROLOGY, designed for the Use of Schools. By JOHN BROCKLESBY, A. M. Published by Messrs. Pratt, Woodford, and Co., No. 4 Cortland Street, New York. 12mo; pp. 240; price 75 cents.

This work treats of the daily occurring phenomena of the atmosphere, and explains them in a manner calculated not only to interest and instruct, but to inspire a taste for philosophical observation. The plan of the work is simple and comprehensive, and the subject one of practical utility to all portions of the community. It explains the cause of wind, rain, clouds, fog, dew, hail, snow, water-spouts, electricity, thunder, the rainbow, etc., etc. Every teacher, at least, should have a copy in his library.

THE INTERNATIONAL WEEKLY MISCELLANY OF LITERATURE, SCIENCE, AND ART. Published by Stringer & Townsend, 222 Broadway, New York, at \$3.00 a year; also in monthly parts of about 160 pages each, at twenty-five cents a month.

This work is what its title purports—an international, of choice selections from the principal magazines and quarterly reviews of Europe and America. But it is not a mere compilation, though it presents the most interesting portions of American and foreign literature; it contains much original matter, and presents a record of the principal literary events of our own times. Its biographical and obituary records are interesting features of the work. The monthly Nos. 1 and 2, for August and September, have been received.

HARPER'S NEW MONTHLY MAGAZINE, No. 4, for September, contains, if possible, more valuable and interesting reading than its predecessors. This work is one of the most valuable publications issued. It furnishes a greater amount and variety of interesting literary and scientific matter than any of the reviews.

FITCH'S MAPPING PLATES, designed for Learners in Geography. By GEORGE W. FITCH. Price \$2.25 per dozen sets. Huntington & Savage, Publishers, 216 Pearl Street, New York, 1850.

These plates are made in the form of maps in the Geography Atlas, but contain only the lines of latitude and longitude, with the degrees of each, as in a complete map. A set embraces a map of The World, United States, North America, South America, a State, Mexico and Guatemala, Great Britain and Ireland, Europe, Southern Europe, Germany, Africa, Asia, Atlantic Ocean, and Pacific Ocean.

These blank maps are designed to be filled out by the pupil in Geography—they are the lines on which the maps are to be drawn. They are arranged in the order in which maps are usually placed in school atlases, and stitched in a cover. They can be sent by mail.

## HOURS OF BOYHOOD.

Air—"Rosa Lee."

Words by Ezra D. Barker.

1. Hours of boyhood, dearer far Than these scenes of manhood are; Happy hours of childish glee,  
 2. Often come in pensive train Thoughts of school-boy days again, When from voices sweet and clear

Hours that nev-er more can be. Oh, how pleasant, oh how fair Were those days without a care!  
 Solo.  
 Playful shouts rang thro' the air, When with lightsome heart I strayed O'er each hill and mossy glade,

Chorus.  
 Friends were faithful, hearts were true, Hope was bright as morning dew; Beauty sparkled in each ray,  
 List'ning to the warbler's tune, Basking in the light of June; Now they're gone—those voices dead—

Life seemed all a sum-mer day, Happy hours of child-ish glee, Hours that never more can be!  
 All are gone with years long fled; Happy hours of child-ish glee, Hours that never more can be!



## MAKING EXCUSES.

READ the following hints to teachers, and avoid making excuses for the defects of your school.

I think it was Franklin that said, "A man who is good for making excuses is good for nothing else." I have often thought of this as I have visited the schools of persons given to this failing. It is sometimes quite amusing to hear such a teacher keep up a sort of running apology for the various pupils. "A class is called to read. The teacher remarks, "This class has just commenced reading in this book." Stephen finishes the first paragraph, and the teacher adds, "Stephen has not attended school very regularly lately." William reads the second. "This boy," says the teacher, "was very backward when I came here—he has but just joined this class." Mary takes her turn. "This girl has lost her book, and her father refuses to buy her another." Mary here blushes to the eyes; for though she could bear his reproach, she still has some sense of family pride; she bursts into tears, while Martha reads the next paragraph. "I have tried all along," says the teacher, "to make this girl raise her voice, but still she will almost stifle her words." Martha looks dejected, and the next in order makes an attempt.

Now the teacher, in all this, has no malicious design to wound the feelings of every child in the class, and yet he has as effectually accomplished that result as if he had premeditated it. Every scholar is interested to read as well as possible in the presence of strangers; every one makes the effort to do so, yet every one is practically pronounced to have failed. The teacher's love of approbation has so blinded his own perception, that he is regardless of the feelings of others, and thinks of nothing but his own.

The over-anxiety for the good opinion of others shows itself in a still less amiable light, when the teacher frequently makes unfavorable allusions to his predecessor. "When I came here," says the teacher, significantly, "I found them all poor readers." Or, if a little disorder occurs in school, he takes care to add, "I found the school in perfect confusion;" or, "the former teacher, as near as I can learn, used to allow the children to talk and play as much as they pleased." Now whatever view we take of such a course, it is impossible to pronounce it any thing better than *despicable meanness*. For if the charge be true, it is by no means magnanimous to publish the faults of another; and if it is untrue in whole or in part, as most likely it is, none but a contemptible person would magnify another's failings to mitigate his own.

There is still another way in which this love of personal applause exhibits itself. I have seen teachers call upon their brightest scholars to recite, and then ask them to *tell their age*, in order to remind the visitor that they were very young to do so well; and then insinuate that their older pupils could of course do much better.

All these arts, however, recoil upon the teacher who uses them. A visitor of any discernment sees through them at once, and immediately suspects the teacher of conscious incompetency or willful deception. The pupils lose their respect for a man whom they all perceive to be acting a dishonorable part. I repeat, then, *never*

*attempt to cover the defects of your schools by making ridiculous excuses—Selected.*

## DUTIES OF PARENTS.

It is a matter of surprise that in the general awakening to the importance of the subject of education the duties of parents are not more strongly felt. Even among those characterized as the friends of education, the interest manifested impels little or no farther than to induce them to send their children regularly to school; and when this is done, they appear to think that nothing more is required of them. This apathy and indifference to the success of their children, though always criminal, was somewhat excusable a few years since when education was considered a matter of minor importance; but now, when it has become a subject worthy of engrossing the attention of the wisest and best of mankind; when the public mind is awakening to the importance of the subject, such neglect is unpardonable. The parent who thus carelessly suffers his child to proceed with his education, taking no pains to encourage him, or even to mark his progress, is guilty of wasting the mind of the child committed to his charge, and for which he will be held accountable.

Parents do not seem to know that the impressions which their children receive at school may make them happy or miserable, not only in time, but through eternity; consequently, they are not careful to visit the school and observe whether the moral as well as intellectual education of their children is cared for, or whether they are suffered to imbibe and practice all the evil doctrines attendant on that too often "seminary of vice"—the district school. Parents should visit the school frequently. It is a duty they owe not only to their children, but to their teacher.

The occasional presence of parents, while it stimulates the scholars to renewed exertions, will greatly cheer and encourage him. It will show that he is not alone in his endeavors to impart instruction to the children of his charge. Parents should confide in their teacher. If differences of opinion exist with regard to different methods of instruction or government, they should be very careful not to injure their children by speaking disparagingly of their teacher. If his plans are supposed to be ineffectual, he should be told so plainly and kindly, and better ones should be proposed. And even if these do not meet with his approbation they should beware of condemning what they do not understand. It should be remembered that the responsibilities of a teacher are great, and due respect should be given to his opinions.

If he is faithful and conscientious in the discharge of his duty; if he sedulously endeavor to promote the moral and intellectual education of the children committed to his charge; if by means of instruction received from him they become useful members of society, they owe him a debt which money can never pay. If parents realized the weight of responsibility resting on them, they *could* not manifest such utter indifference to the education of their children. May the time soon come when the importance of a good education shall be properly appreciated, and when all things else shall be held in subservience to the one all-important subject, the education of the immortal mind. T.

# THE STUDENT.

A FAMILY MISCELLANY, AND MONTHLY SCHOOL-READER.

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## DESIRE AND MEANS OF HAPPINESS.

BY HON. HORACE MANN.

**I**T is a law of our nature to desire happiness. This law is not local, but universal; not temporary, but eternal. It is not a law to be proved by exceptions, for it knows no exception. The savage and the martyr welcome fierce pains, not because they love pain, but because they love some expected remuneration of happiness so well, that they are willing to purchase it at the price of pain, at the price of imprisonment, torture, and death.

The young desire happiness more keenly than any others. This desire is innate, spontaneous, exuberant, and nothing but repeated and repeated overflows of the lava of disappointment can burn or bury it in their breasts. On this law of our nature, then, we may stand as on an immovable foundation of truth. Whatever fortune may befall our argument, our premises are secure.

The conscious desire of happiness is active in all men. Its objects are easily conceivable by all men. But, alas! toward what different points of the moral compass do men look for these objects, and expect to find them? Some look for happiness above, and some below; some in the grandeur of the soul, and some in the grossness of the sense; some in the heaven of purity, and some in the hell of licentiousness. Wherever it is looked for, the imagination adorns it with all its glowing colors.

Multitudes of those who seek for happiness will not obtain the object of their

search because they seek amiss. Deceived by false ideas of its nature, other multitudes, who obtain the object of their search, will find it to be sorrow and not joy, Dead Sea apples and not celestial fruits.

Whether a young man shall reap pleasure or pain from winning the objects of his choice, depends, not only upon his wisdom or folly in selecting those objects, but upon the right or wrong methods by which he pursues them. Hence a knowledge what to select and how to pursue is as necessary to the highest happiness as virtue herself.

Virtue is an angel, but she is a blind one, and must ask of knowledge to show her the pathway that leads to her goal. Mere knowledge, on the other hand, like a Swiss mercenary, is ready to combat either in the ranks of sin or under the banners of righteousness; ready to forge cannon balls or to print New Testaments; to navigate a corsair's vessel or a missionary's ship.

But however energetic and vast the desires of happiness may be—swelling in millions of hearts, growing on enjoyment, and growing still more on disappointment—nothing is more certain than that the range and possibility of happiness which God has provided and placed within arm's length of us all, is still vaster than the desire of it in any and in all of His creatures.

We are finite, and can receive only in finite quantities; He is infinite, and gives in infinite quantities. Look outwardly, and behold the variety and redundancy of

means which the Creator has prepared to meet and to satisfy all the rational wants of His children. So ample and multitudinous are the gifts of God, that He needed an immensity of space for their storehouse; and so various are they, and ascending one above another in their adaptation to our capacities of enjoyment, that we need an eternity to sit out the banquet.

See how the means of sustenance and comfort are distributed and diversified throughout the earth. There is not a mood of body, from the wantonness of health to the languor of the death-bed, for which the alchemy of nature does not proffer some luxury to stimulate our pleasures, or her pharmacy some catholicon to assuage our pains.

What texture for clothing, from the gossamer thread which the silkworm weaves, to the silk-like furs which the winds of Zembla can not penetrate! As materials from which to construct our dwellings, what Quincys and New Hampshires of granite; what Alleghanies of oak, and what forests of pine belting the continent! What coal-fields to supply the lost warmth of the receding sun!

Notwithstanding the beautiful adaptation of the physical world to our needs, yet when we leave the regions of sense and of sensuous things, and ascend to the sphere of the intellect, we find that all which had ever delighted us before becomes poor and somber in the presence of the brighter glories that burst upon our view. Here fresh and illimitable fields open upon us, and, corresponding with the new objects presented, a group of new faculties to explore and enjoy them is awakened within us.

The outward eye sees outward things, and the outside of things only; but the inward eye is emancipated from the bonds that bind its brother. The great panorama of the universe limits and bounds the outward organs that behold it; gives them all they can ask; fills them with all they can receive.

Splendid and majestic as are the heavens and the earth to the natural eye, yet they are solid, opaque, impervious. But to the subtle and pervading intellect, this solid framework of the universe becomes

transparent, its densest and darkest textures crystalline. To the intellect, each interior fiber and atom of things is luminous.

To the intellect of man all recesses are opened; all secrets revealed. Sunlight glows where darkness gloomed. To this power, no height is inaccessible, no depth unfathomable, no distance untraversable. It has the freedom of the universe. It can not be swallowed up in the waters of the sea; it can not be crushed by the weight of the earth; and in the midst of the fiery furnace, one whose form is like the Son of God walks by its side.

So, too, all created things are governed by laws, each by its own. These laws the intellect of man can discover and understand; and thus make his dominion co-extensive with his knowledge. So far as we understand these laws, we can bring all substances that are governed by them under their action, and thus produce the results we desire, just as the coiner subjects his gold dust to the process of minting and brings out eagles.

So far as we understand the Creator's laws, He invests us with His power. When knowledge enables me to speak with the flaming tongue of lightning across the continent, is it not the same as though I had power to call down the swiftest angel from Heaven, and send him abroad as the messenger of my thoughts? When a knowledge of astronomy and navigation enables me to leave a port on this side of the globe and thread my labyrinthine way among contrary winds, and through the currents and counter-currents of the ocean, and to strike any port I please on the opposite side of the globe, is it not the same as though God for this purpose had endowed me with His all-seeing vision, and enabled me to look through clouds and darkness around the convex earth?

Nor does the intellect stop with the knowledge of physical laws. All the natural attributes of the Author of those laws are its highest and noblest study. Its contemplations and its discoveries rise from the spirit that dwelleth in a beast to the spirit that dwelleth in a man, and from this to the Spirit that dwelleth in the heavens. Every acquisition of knowledge,

also, which the intellect can make, assimilates the creature to the all-knowing Creator. It traces another line on the countenance of the yet ignorant child, by which he more nearly resembles the Omniscient Father.

The human soul is DESIRE; the works and wisdom of God are a fountain of supply. If the soul of man is a void at birth, it is a void so capacious that the universe may be transfused into it.

[The foregoing article is extracted from that excellent little work entitled "Thoughts for a Young Man."

*Ex-uber-ant*, (egz-yu'ber-ant) abundant. *Dead Sea Apples*, a kind of fruit found on the shores of the Dead Sea, which is very inviting in appearance, but extremely bitter to the taste. *Mer'ce-na-ry*, one who is hired to do any thing; but generally means one who will do any mean thing for the sake of money. *Cor-sair*, a pirate; one who goes on the ocean with an armed vessel without the sanction of any government, for the purpose of robbing the merchant's vessels. *Al'che-my*, the science which is now called *chemistry* was once called alchemy, but it was then understood by only a few, and they claimed that by it the baser metals, such as iron, lead, etc., could be turned into gold. *Phar'ma-cy*, usually the practice of preparing and compounding substances for medicine; but here, that which produces these medicines—nature. *Ca-thol'i-con*, a remedy for all diseases.

## WINTER'S APPROACH.

BY E. M. GUTHRIE.

'Tis growing cold; the frosts now creep  
Upon the earth when mortals sleep;  
Ah yes! I see a yellow tinge  
Upon yon bluff's soft, verdant fringe—  
I've a dear home and friends are nigh,  
I would that all were blessed as I.

But there are many, 'tis too true,  
That can but fear this frozen dew;  
They see cold winter coming on,  
And they are homeless and alone—  
'Tis sad, 'tis sad, I can but sigh,  
I would that all were blessed as I.

I wish it were within my power  
To brighten each dark winter hour  
To all the friendless that now fear  
The biting frosts approaching near—  
I'll pray for them, and I will try  
To make all others blest as I.

## THE RIGHT EDUCATION OF CHILDREN.

TO THE reflecting mind it must appear strange that, at this advanced age of civilization, the proper manner of educating the young and fitting them for future usefulness, is so imperfectly understood.

The parent naturally seeks the elevation of his children, both in a moral and a social point of view. And to him nothing can be more pleasing than the thought that at some future time the seeds of instruction which he is now implanting in the youthful minds of his children will spring up and bear fruit abundantly; and that his offspring will yet occupy such a position in society as will reflect credit upon their parents, and do honor to themselves.

All this is perfectly in keeping with the laws of nature, but the means employed for the attainment of the desired object are in most cases such that the hopes of the parent are only realized at the expense of the child's health, and not unfrequently at the price of his life. These latter considerations, however, are only applicable to those youths in whom there seems to be implanted a natural thirst after knowledge.

Such a child, if he apply himself closely to his studies, and take little or no physical exercise, must keep his mind in continual exercise; consequently there is more blood sent to the brain than it actually requires, and more than to any other one organ in his body. Even though such one may become a prodigy, it is to be feared that he can not survive long without a thorough reformation in regard to his manner of study.

It is the case with too many parents, when they see one of their children more fond of his books than another, to encourage him to go on in the pursuit of knowledge, and stimulate him to undertake the mastery of even more difficult studies than he had before attempted. Hence their beloved son, instead of snuffing the pure air of heaven, is continually tied down to his books—study, study, study, nothing but study.

Ah, parent! dost thou not see the pale

face and emaciated form of thy son? he is already worn out with the over-exertion of his intellect. And because he has a natural desire for the attainment of knowledge, a constant craving after more, and yet more, will you still urge him to press forward in the hope of seeing him at length mount to the very summit of the hill of science? Will you encourage him to devote his every moment to the attainment of learning, even at the sacrifice of health? Nay, give him healthful exercise; let his physical, as well as his mental powers have full, free, and vigorous exercise.

O, that the time may soon come, when parents will begin to feel the necessity of seeing that their children are properly educated, without endangering their health.

Dr. Wieting mentions the case of a lad, about seven years of age, who could solve a mathematical problem which many at a far more advanced age, and much higher pretensions, would attempt in vain. His parents loved him as a good parent ever will regard his offspring, and urged him, or rather encouraged him in applying himself closely to his studies, so much so that he took little or no physical exercise.

And what was the consequence? Thus over-exerted, his brain received a greater quantity of blood than it required and soon became diseased, which terminated the life of the child in his eighth year. His parents literally killed him with kindness. Thus the very means made use of with the design of promoting his happiness proved the loss of his life.

Such a child, rightly educated, might have become an ornament to his family, and a blessing to his country. Had his mental and physical powers been exercised in the right proportions, he might have now been the joy of his parents.

Will parents ever feel the necessity of looking to the real interest of their children? Let daily exercise become an essential part of the education of children; then the thin face and the emaciated figure shall give place to the hale, hearty, and robust form, blending a vigorous intellect with a good and healthy constitution.

Such a scholar will not be likely to die in the morning of youth, but may live to be respected and useful, and would un-

doubtedly be the means of exerting an influence for good which would be widely felt wherever he might be placed.

A. J. F.

### THE END OF EDUCATION.

**T**HE multitudes think that to educate a child is to crowd into its mind a given amount of knowledge; to teach the mechanism of reading and writing; to load the memory with words; to prepare for the routine of trade. No wonder, then, that they think every body fit to teach.

The true end of education is to unfold and direct aright our whole nature. Its office is to call forth powers of thought; affection, will, and outward action; power to gain and spread happiness. Reading is but an instrument; education is to teach its best use.

The intellect was created, not to receive passively a few words, dates, and facts, but to be active for the acquisition of truth. Accordingly, education should inspire a profound love of truth, and teach the process of investigation. A sound logic, by which we mean the science of the art which instructs in the laws of reasoning and evidence, in the true method of inquiry and the source of false judgment, is an essential part of a good education.—*Selected.*

**LIVE FOR SOMETHING.**—Thousands of men breathe, move, and live—pass off the stage of life and are heard of no more. Why? They did not a particle of good in the world.

Will you thus live and die, O man immortal? Live for something. Do good and leave behind you a monument of virtue that the storms of time can never destroy.

Write your name by kindness, love, and mercy on the hearts of the thousands with whom you come in contact year by year, and you will never be forgotten! No, your name, your deeds will be as legible on the hearts you leave behind, as the stars on evening. Good deeds will shine as brightly on the earth as the stars of heaven.—*Dr. Chalmers.*



WILLIAM CULLEN BRYANT.

**W**ILLIAM CULLEN BRYANT was born at Cummington, Mass., November 3d, 1794. His father, a well-educated and popular physician, perceiving his son's early indications of superior genius, carefully attended to his instruction, and guided his literary taste. It is said that he

"\* \* \* in the bud of life  
Offered him to the muses."

Mr. Bryant's first printed composition was some verses written as a school exercise when he was only ten years of age. In his thirteenth year he wrote the "Embargo"—a political satire of the times—which was published in Boston in 1807. This poem displays great genius, and is not excelled in vigor and smoothness by any thing from the old poets written at a like age.

It is said that when Tasso was nine years old, he wrote some lines to his mother, which have been admired; that at ten, Cowley finished his "Tragical History of Pyramus and Thisbe;" that at twelve, Pope wrote the "Ode to Solitude;" but none of these instances of literary precoc-

ity are more remarkable than that of William Cullen Bryant.

In his sixteenth year he entered an advanced class at Williams College. There he distinguished himself over all his classmates for his proficiency in the languages. After remaining in that institution for two years, he obtained permission to leave and enter upon the study of law. About this time he produced his ever-living "Thanatopsis." He first commenced the study of law with Mr. Justice Howe, and afterward entered the office of Hon. William Baylies. In 1815 he was admitted to the bar at Plymouth, Mass., and successfully followed his profession until 1825, when he abandoned it to devote himself to literature.

In 1821 he was married to a well-educated lady at Great Barrington, Mass. During this year his excellent poem, "The Ages," was delivered before the Phi Beta Kappa Society of Harvard College. By advice of his Boston and Harvard friends, this poem, with "Thanatopsis," "To a Water-fowl," "Green River," "The Yellow Violet," and some others, were published in a volume. These gained for him a rep-

utation as one of the first poets of the time.

Soon after his removal to the city of New York, Mr. Bryant became one of the editors of the "New York Monthly Review." In this work he first published some of his most admired poems. This Review was merged into the "Literary Gazette," and in 1826 he became one of the editors of the New York Evening Post—one of the oldest political and commercial journals in this country.

It is now nearly a quarter of a century since Mr. Bryant first connected himself with the New York Evening Post, and he still continues its leading conductor, exerting an influence as an honest and candid journalist.

The years of 1834 and 1835, and part of 1836, Mr. Bryant spent with his family in Europe, devoting himself to literary studies. He traveled through France, Germany, and Italy, residing several months in each important city. In 1843 he traveled through the Southern states and Florida. In 1845 he made a second visit to Europe. And again in 1849 he visited Europe for the third time, making a brief tour of the Continent, and from thence passing leisurely through the Highlands of Scotland, to the Shetland and Orkney Isles, as far north as sixty degrees of latitude.

Mr. Bryant's descriptions of the appearance and habits of the peasantry of these isles were faithful and interesting. He studied with deep interest the social and physical condition of those peasants as few travelers have done. Indeed, the incidents of this tour were full of interest to our poet. He visited the picturesque scenery of the land of Burns, when in its highest beauty. He was the guest of Lord Jeffrey—the first among European journalists—in his home at Craig Crooke. On the Continent he was the visitor and guest of many of the first scholars and statesmen.

We have not time nor sufficient space to mention all of his productions, but his last published work is called "Letters of a Traveler; or, Things Seen in Europe and America." It is composed of the choicest letters written during his several

tours in Europe and America. These deal not so much with distinguished men, as with matters of general interest to all reflecting minds. Probably no record of European travel will be more profitably read than this.

Mr. Bryant's literary history has been far less eventful and stirring than that of many other American authors, yet no other one has given so marked and inefaceable a stamp to our literature. His mind, like our deep and silently-flowing waters, has moved onward in its quiet, unobserved channel, overflowing only to spread far and wide its rich alluvial of simple, pure, and golden thought, which will not be lost to our country.

Of his character and rank as a poet, he stands second to no American. He illustrates in his diction more than any other American author, the idea of Coleridge, that the best of human language is derived less from objects of nature than from the operation of the mind itself. He studies nature and man in their best and noblest aspects, as he would study the chief masterpiece of art, not less to profit by the strongest impressions of their exalted excellence, than to avoid the defects of inferior models.

Both in mental and social character, Mr. Bryant is a man of marked simplicity. Honest in his convictions, and averse to pretense and show, he goes directly to the real meaning and intent of things, both in his writings and studies. Though in the heart of the great metropolis, in the midst of the heat and strife of politics, and the rushing tides of trade and commerce, sustaining the arduous labors of a daily journal, yet few men make more leisure for calm and solid literary pursuits.

Speaking four or five languages, he finds almost daily mental aliment in their stores of poetry, literature, history, or science. In all these relations the bent of his mind is to the truths which lie beneath. Hence, uniting that boldness, which is also an essential element of genius, his political adversary often finds severity in the fearless expression of his honest convictions.

"Mr. Bryant is a close observer of nature. Hill and valley, forest and open plain, sunshine and storm, the voices of

the rivulet and the wind, have been familiar to him from his early years; and though he has not neglected books, they have been less than these the subjects of his study and the sources of his pleasure. No poet has described with more fidelity the beauties of creation, nor sung in nobler song the greatness of the Creator.

"He is the translator of the silent language of the universe to the world. His poetry is pervaded by a pure and genial philosophy, a solemn, religious tone, that influence the fancy, the understanding, and the heart. He is a national poet. His works are not only American in their subjects and their imagery, but in their spirit. They breathe a love of liberty, a hatred of wrong, and a sympathy with mankind."

[The above article we have condensed from a sketch of William Cullen Bryant, by O. C. G., published in the "American Monthly Musical Review," and added to it a few facts from other sources.—Ed.]

## WHAT OWEST THOU THY GOD?

BY LOUIS BARLOW.

We who have breath'd the balmy air,  
And seen the fragrant flowrets bloom,  
And gather'd all that's bright and fair  
Along our pathway to the tomb;

We, who have gazed upon the stars,  
That watch like angels o'er the earth,  
And heard the music of the spheres,  
When 'neath the sky we wander'd forth;

Bending before the King of Kings,  
We humbly raise our trusting eyes.  
We owe Thee for a thousand things,  
Almighty Ruler of the skies!

With grateful homage for the good  
Thy daily bounty still supplies,  
By each succeeding day renew'd,  
Like dew-drops falling from the skies;

Yet we—how impotent and vain—  
The frailest creature here below  
As well might tell the drops of rain  
As number half the things we owe.

The hope, the faith, whose eagle plume  
Can soar beyond the starry skies,  
And gild the shade of darkest gloom,  
And o'er the vale of death arise,

Has been the priceless gift of Him  
Who came our darken'd world to bless,  
When altar fires were cold or dim,  
And earth a moral wilderness.

We owe to Thee the friends we love,  
Who cling like angels round our way,  
Oft as our weary footsteps rove  
Through shadowy year or sunless day.

Where'er Thy boundless goodness smiles,  
In evening skies or morning's ray,  
Where earth her lofty mountains piles,  
Or heaven is mirror'd in the sea,

We strive to find, but strive in vain,  
Where thought can roam or eye can see,  
In earth or sky, in sea or plain,  
Aught that we do not owe to Thee.

Then, yielding, let us humbly own,  
Though lowly and impure are we,  
That, owning naught beneath Thy throne,  
Earth still is rich enough in Thee.

## SEIZE TIME BY THE FORELOCK.

BY G. LINNÆUS BANKS.

SEIZE time by the forelock and use it,  
Nor your arms on your breast idly fold,  
And then, though you live to be ninety,  
Yet, in spirit, you'll never grow old.

'Tis not years, man, that constitute wisdom,  
Nor the morning of life alone youth;  
There be those who are children at sixty,  
And boys who are old in the truth.

Time is money, did man but employ it,  
And a rich harvest of gold it yields;  
While he who sits down like a sluggard,  
Finds but thistles and tares in his fields.

By the force of the mind and its culture  
Is the age of man tested and tried—  
For a Newton was older at fifty  
Than was Methuselah when he died.

*Selected.*



## Coats of Arms, or State Seals.—No. 7.



### MAINE.

**T**HE COAT OF ARMS of the State of Maine consists of a white shield, on which is represented a pine tree, and at the foot of the tree lies a moose deer. The shield is supported on the right by a husbandman resting on a scythe, and on the left by a seaman resting on an anchor. A ship appears in the distance, on the left, and on the right a house. The foreground represents land.

Under the shield is the name of the state in large Roman capitals. Above the shield, for a crest, is the North Star; and between the star and the shield is the motto, *Dirigo*—"I direct." The pine tree—intended to be represented on the escutcheon, is called the *mast pine*, an evergreen of towering height, and enormous size, the largest and most useful of American pines, and the best timber for masts—is one of the staples of the commerce of Maine, as well as the pride of her forests.

The moose deer—the largest of the native animals of the state, which retires before the approaching steps of human

inhabitaney, and is thus an emblem of liberty—is here represented quietly reposing, to denote the extent of uncultivated lands which the state possesses.

The supporters of the shield—a husbandman on one side, representing agriculture, and a seaman on the other, representing commerce and fisheries—indicate that the state is supported by these primary vocations of its inhabitants.

As in the arms of the United States a cluster of stars represent the states composing the nation, so the North Star may be considered particularly applicable to the most northern member of the confederacy; and as it is a directing point in navigation (*Dirigo*), and is here used to represent the state, so the state may be considered the citizen's guide, and the object to which the patriot's best exertions should be directed.

Maine is the northeastern state of the Union. It is bounded on the north by Canada, on the east by New Brunswick and the Atlantic, on the south by the Atlantic, and on the west by New Hamp-

shire and Canada. According to the present boundary, established in 1842, its length from north to south is about 320 miles, and its breadth from east to west about 200 miles, and contains an area of 30,000 square miles.

This state is divided into *thirteen counties*, and contains about 500 townships. The population is 600,000. Augusta, the capital of the state, is situated on both sides of the Kennebec, forty-seven miles from its mouth. The two parts of the town are connected by a bridge. The situation is a pleasant one, at the head of sloop navigation.

The northern and northwestern portions of the State of Maine are mountainous, and have a poor soil. This territory is still covered with vast forests, into which the hunter and lumbermen are the principal pioneers. Throughout the interior it is generally hilly, and the land rises so rapidly from the sea shore, that the tide, in the numerous rivers that seek the ocean, flows but a short distance inland. The best land in the state is between the Penobscot and Kennebec rivers.

The principal productions of the state are grass, Indian corn, wheat, barley, rye, and flax. The uncleared lands are of great extent, and furnish an immense amount of pine lumber. Probably there are \$2,000,000 worth of lumber obtained in this state annually.

The coast is lined with islands, and indented with numerous bays and inlets, which furnish more good harbors than are found in any other state in the Union.

The climate of Maine is subject to great extremes of heat and cold, yet it is generally favorable to health. The cold of winter is very severe, yet, being so steady, it is less injurious to health than the sudden changes so frequent in many parts of our country. Near the ocean the heat of summer is tempered by the sea breezes.

The first settlement of Maine was attempted by a party of Englishmen, on the Kennebec, at the early date of 1609. Other parties entered the territory at subsequent periods, but the first permanent settlement was made about the year 1630, at Bristol, on the eastern side of Damariscotta River, at Pemaquid Point.

In 1635, the district of Maine was granted by the British crown to Sir Ferdinand Gorges. In 1652, the State of Massachusetts purchased this territory of the heirs of Gorges for \$5,334. Maine was annexed to Massachusetts in 1691, by a charter from William and Mary, and remained under the jurisdiction of this state until 1820, when it became an independent state and was admitted into the Union.

Maine has several fine rivers. Among these the principal ones are Penobscot, Kennebec, Androscoggin, and Saco. It also has numerous lakes and ponds in the interior. The largest lakes are Moosehead and Umbagog. The principal elevation is Mount Katahdin, which is 5,300 feet high.

The State of Maine has about 200 miles of railroad already completed, and as many more surveyed. It has only fifty miles of navigation by canal. There are several good literary institutions in this state—Bowdoin College, at Brunswick; Waterville College, at Waterville; Theological Seminary, at Bangor; and the Maine Wesleyan Seminary, at Readfield. There are also about ninety academies, and some 3,500 common schools.

The governor of Maine is chosen annually by the people, and has a salary of \$1,500. The elections are held the second Monday in September, and the legislature meets the second Wednesday in May. The separation of this state from Massachusetts has had a most favorable effect. Legislation, with the energy of its people, has already effected wonders; and commerce, agriculture, manufactures, and education, are annually making advances.

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VARIETIES.—All qualities, good and bad, improve by exercise. Even courage is, in a good degree, the result of circumstances. Nearly all persons would be courageous if exposed from their infancy to danger and hardship.

People of mean capacities always despise and ridicule more what is above their own intellect than that which is below its standard.

## Science,

"Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### GUTTA PERCHA.

SOME twenty years ago, the ingenuity of Mackintosh, with a bit of India rubber, began to conjure up a world of cunning devices, of which there seemed to be no end. Elastic substances seemed destined to receive every development and application of which nearly every material already known, whether hard or soft, was capable.

We were to be clad in Caoutchouc;\* to roof our houses with it; to bottle up our drinks in it; and to be cradled and confined in it. While these dreams were fast being realized, behold! a new tree is discovered, yielding a new juice, and having new properties, new pliabilitys, and new virtues.

Half a dozen years ago all was India rubber; now it is *Gutta Percha*. This new substance soles our shoes, gives noiseless curtain-rings for the invalid's bed, furnishes us with ewers, and basins, and trays, that can not be broken, and puts a neat whip into the hand of the horseman.

It gives us tubes for gas and water, belts for machinery, drinking vessels, ink-stands, bottles and corks, card-plates, picture frames, flower stands, speaking trumpets, miners' hats, and even street pavements. And in the windows of toy shops may be seen dolls, the faces of which can be pinched into any conceivable form of hideous looks.

Such are some of the almost countless variety of uses to which this new substance may be applied. Here is another great treasure yielded up by abundant nature for man's ingenuity and convenience. The vagaries which fancy can indulge concerning its uses are hardly more strange or curious than the real applications for which it has already been employed.

The tree which produces *Gutta Percha*

is a native of Malacca, and the Malay islands. It was first discovered by Mr. Thomas Lobb, in Singapore, while employed in a botanical mission. The substance itself was brought into notice in Europe by Mr. Montgomerie. He heard of it as long ago as 1822, and afterward, while in Singapore, found it employed by the natives to make handles for their hatchets.

There are three varieties of the gum: *Gutta Girek*, *Gutta Tubau*, and *Gutta Percha*, all of which are Malayan terms. *Gutta* is the name of the juice of the tree, or plant, and the words *Girek*, *Percha*, etc., indicate the varieties of the tree from which the juice is obtained.

These trees grow to a large size, varying from three to six feet in diameter. They have some external resemblance to the pine tree, and are said to often attain to the age of a hundred years. The wood is soft, fibrous, and spongy, and is useless as timber. Besides the gum which it yields, it produces an oil that is used by the natives as an article of food.

At its first discovery by the Europeans, the natives were in the habit of tearing or cutting down the trees to get this marvelous juice. Had this practice continued, the supply must, ere long, have materially decreased; but since commercial enterprise laid hold of the article, the natives have been persuaded to obtain the juice in a more business-like manner, by tapping the trees, as is practiced with the India rubber and the maple tree.

The rough gum, when obtained from the natives, is in lumps resembling packages of bad leather. Sometimes, however, the Malays give their collections the artificial form of a bird, or a duck, and then they often place a stone in the body of the *Gutta duck*, that they may get more money from the trader for a small amount of gum.

\* Pronounced koo'chook. Caoutchouc, or India rubber, is a gum, or juice, obtained from trees found in South America.

The gum is unfit for use as obtained from the natives. The first process of the manufacture is to slice the lumps, or packages, or ducks, into chips, by the agency of a revolving wheel, furnished with knives. The gum is found to contain small stones, grit, bits of bark, etc.

When thus cut up, it is subjected to the influence of hot water, by which the rubbish is separated, and the purified juice bubbles up to the surface of the water, where it is collected and cooled, in the form of Iceland moss, or the thin, flat crusts of moss which cover rocks and the bark of trees.

It has next to be made pliable. This, too, is done with the assistance of heat. For this purpose the gum is placed in a copper mortar, within which a ribbed iron cylinder revolves, squeezing and kneading the substance into a paste. On the completeness of this operation the quality of the manufacture depends. This process lasts for some four or five hours.

The Gutta paste, by the application of heat, can be spun, spread out, rolled into sheets as thin as those of oil silk, or may be wrought up into the thousands of forms for use and ornament of which a strong and plastic substance is susceptible.

There is no limit to the length of the tube or cord that may be spun from the Gutta paste; and should it break, it can readily be cemented, or welded, by the use of heat. It not only defies wet and cold, but is so little affected by acid as to be extensively used by the manufacturing chemist as a receptacle for his acids.

The material has singular properties as a conductor of sound. A pipe made of it will convey a whisper to a great distance, thus affording an excellent medium of communication in factories and mansions having many stories. Moreover, the worn-out wares can be melted, purified, kneaded, and molded over again into new goods and chattels. There is, however, an objection to Gutta Percha as a decorative material, for up to the present time there has been no means discovered which will render it susceptible of receiving coloring matter readily. The hues imposed upon it are dull and coarse; but

some means may possibly be found to overcome this difficulty. Then, too, it has a peculiar odor, which is curiously and unpleasantly medicinal, that may also be overcome.

#### ETYMOLOGY OF THE NAMES OF COUNTRIES.

**P**HENICIA is considered the birth-place of commerce, and its inhabitants became the greatest commercial people in the ancient world. To them is also attributed the invention of letters. From a very ancient history we learn that they gave names to the countries which they visited; and these names, in the Phœnician language, always signify something characteristic of the place which they designate. This will be seen from an examination of the etymology of the names of the following countries:

*Europe*, signifies a country of white complexion; so named because the inhabitants there were of a lighter complexion than those of either Asia or Africa.

*Asia*, signifies between, or in the middle, from the fact that geographers then placed it between Europe and Africa.

*Africa*, signifies the land of corn, or ears. It was celebrated for its abundance of corn, and all sorts of grain.

*Spain*, a country of rabbits, or cronies. This country was once so infested with these animals, that the inhabitants petitioned Augustus for an army to destroy them.

*Italy*, a country of pitch; from its yielding great quantities of black pitch.

*Gaul*, modern France, signifies yellow haired; as yellow hair characterized its first inhabitants.

*Hibernia*, is utmost, or last habitation; far beyond this, westward, the Phœnicians never extended their voyages.

*Britain*, the country of tin; as there were great quantities of lead and tin found on the adjacent islands. The Greeks called it Albion, which signifies, in the Phœnician tongue, either white or high mountains, from the whiteness of its shores, or the high rocks on the western coast.

*Syracuse*, signifies bad savor; called so from the marsh upon which it stood.

## General Intelligence.

**OCEAN STEAMSHIPS.**—The Cunard line of English steamers, between Liverpool, Eng., and Halifax, Boston, and New York, has recently had another fine vessel added to it, called the *Africa*. This line now has in all six steamers running regularly between Liverpool and the United States. The steamers of the Cunard line are called the *Cambria*, *Canada*, *America*, *Europa*, *Asia*, and *Africa*.

The United States mail steamers, between New York and Liverpool, are known as the Collins line. The names of the four great continents were appropriated to the English steamers, but the oceans remained, and these have been applied to the American steamers—names more grand and expressive, if possible, than those applied to the Cunard line.

The Collins line of steamers is to be composed of at least five vessels, bearing the following names, viz.: *Atlantic*, *Pacific*, *Arctic*, *Baltic*, and *Adriatic*. The *Atlantic* left New York on her first trip last April. The *Pacific* was the next one completed, and this vessel has made the quickest passage on record, coming from Liverpool to New York in *ten days, four hours, and forty-five minutes*. The next in order is the *Arctic*, which left New York for Liverpool on the 26th of Oct. The *Baltic* will succeed the *Arctic* and sail on the 16th of the present month.

The steamers of both these lines leave New York and Liverpool with astonishing regularity, when we take into consideration the vast distances they must traverse during each trip. It is common to see advertisements of them, in our city papers, of the days of sailing from each port, for three and even five months in advance. And they seldom fail to leave the dock at twelve o'clock at noon on the day advertised.

**THE RAILROADS OF THE WORLD.**—According to the calculations of Dr. Lardner, there were in operation at the commencement of 1849, in different parts of the globe, a total length of 18,656 miles of railway, on which a capital of \$1,788,864,280 had been actually expended.

Besides this, it is estimated that there were at the same time in progress of construction a further extent of 7,829 miles, the cost of which, when completed, would be \$710,270,000. Thus, when these latter lines shall have been brought into operation, the population of Europe and

the United States (for it is in these countries only that railways have made any progress), will have completed, within the period of less than a quarter of a century, 26,485 miles of railway; that is to say, a greater length than would surround the globe, at the cost of nearly \$2,500,000,000.

**MONUMENT FOR COLUMBUS.**—The discoverer of America, Christopher Columbus, after a lapse of 850 years without a monument to his memory, will soon have his name remembered for future generations. The ingratitude of men will be repaired, in a measure, by a grand subscription which has recently been opened at Madrid by a poet, Mr. Salvador Bermudes, and Mr. Martinez de la Rosa, late ambassador of Spain to Paris. The monument will consist of a bronze statue, nearly twenty feet high, surrounded by groups of figures of great variety.

**THE AMERICAN ARCTIC EXPEDITION.**—A letter has recently been received by the Navy Department, from Lieut. Haven, dated "Off Port Leopold, Aug. 22d, 1850." The officers and crew were in excellent health, and entertained bright hopes of success in the enterprise. The expedition had encountered much ice. At the date of the letter the "*Advance*" had separated from the "*Rescue*."

**PEACHES.**—During the season the State of New Jersey sent into the city of New York 1,388,500 baskets of peaches, which were sold for about \$350,000.

**JENNY LIND.**—During the past month Jenny Lind has been giving concerts in Boston, Mass., Providence, R. I., and Philadelphia, Pa., at each of which great enthusiasm prevailed to listen to the warblings of the world-renowned Nightingale. She has now returned to New York, and will remain here for several weeks, giving three concerts each week.

**SILVER MINES IN KENTUCKY.**—Silver mines have recently been discovered at Cumberland Falls, Kentucky, which are said to yield a clear profit of \$100 to the hundred pounds.

**EGYPTIAN PERFUME.**—A bottle of Egyptian perfume 2000 years old is said to be preserved, which still retains its odor.

**PROVIDENCE, R. I.**—The population of Providence, according to the census which has just been completed, is 41,416, being an increase of 18,244 in the last ten years.

## YOUTH'S DEPARTMENT.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### THE TWO KINDS OF REVENGE.

BY MISS ELIZA A. CHASE.

**I** WOULD not do it, John; you will be sorry for it."

"I will do it; I will be revenged on that coward; he dares not resist, he dares not raise his hand even."

"Arthur Anderson is not so great a coward as you think. Who rushed before those frightened horses, and saved little Charlie Jarvis last week? It was Arthur, while the rest of us stood by, stupid with fear. But you talk of revenge; how has he injured you?"

"By telling of that little scrape of Will Jones and myself in Judge Sandford's orchard. The teacher would not have found it out but for him. You have heard all about it, though you were not there."

"But Arthur could not avoid telling, as Mr. Weston asked him. You need not be so angry for that."

"I know, Bernard Harmor, you are his friend, and try to be as saintly as he; and I suppose you will turn informer too, and tell him what I say; but one thing is true, this sneaking tattler shall find before night that I am not to be trifled with."

"And let Bernard Harmor beware of turning tattler, or he may be served like Arthur Anderson," chimed Will Jones, as he flourished a stout cane.

Arthur Anderson was an orphan, and resided with his grandfather, Mr. Morris. His parents had removed to Wisconsin when he was quite young, and after a few years of hardship and suffering his father died, and in a

short time his mother also was laid in the grave. Her last act was to write to her father, commending her child to his love and protection.

The old man received his charge with tears, and the gentle face of the boy, so like his departed mother's, won the love of the whole family, nor did his conduct disappoint their expectations.

Deprived of the advantages of school in his western home, he had been carefully educated by his mother, who had also instilled into his mind the purest principles, and trained him to the best habits.

Though modest and retiring in his manners, he possessed unusual moral courage, and when circumstances required, acted with a promptness and decision that surprised those who had seen his quiet, thoughtful, and almost shrinking ways on ordinary occasions.

Attending the same school with Arthur were the two boys, John Ferris and William Jones, both of whom possessed the unenviable notoriety of the pest of the neighborhood. A few days before the preceding conversation had taken place, these two worthies had seen fit to absent themselves from school in the afternoon, and visit the orchard of Judge Sandford, which, as it stood in a retired situation, afforded an excellent field for their predatory excursions.

Not content with eating and destroying the fine fruit, they had broken down the loaded limbs, and even gone so far as to girdle several of the finest

trees. Judge Sandford had discovered the theft, and suspecting some of the schoolboys, made a complaint to the teacher.

On questioning several of the boys, including the guilty ones, all of whom denied any knowledge of the affair, the teacher turned to Arthur, saying, "It is hardly necessary to ask you, as you were not at school on that day, but can you tell me any thing of this matter?"

To his infinite surprise Arthur blushed, hesitated, and then answered, "Yes sir." "Tell me, then," said Mr. Weston; and seeing the confusion of the boy, he added, somewhat sternly, "I must know the truth; but such acts are so unlike you, Arthur—"

A bright crimson flushed the face of the boy, and an indignant look for a moment took the place of his usually mild expression; but, with an effort, he calmed his feelings, and giving one appealing look to the offenders he said, firmly, "The boys who performed this act are present, and I would much rather they would confess the truth, than that they oblige me to inform of them."

Again the teacher questioned the boys, and each denied the deed. "It remains for you, Arthur, to tell us what you know," he said. Thus addressed, Arthur proceeded: "On Monday last, as I was passing the by-road near Judge Sandford's orchard I heard voices, and on looking I saw John Ferris and William Jones in the act of climbing a peach tree, the lower limbs of which were broken. They were talking of knives, and one observed that, 'If it did kill some of the trees it was no matter, there would be enough left; but I knew not to what they referred.'"

Thus exposed, the two interesting youths suffered a deserved punishment, and, in consequence, their anger was excited toward Arthur, and they

vowed revenge. Unfortunately for their plans, the object of their wrath did not attend school that day, and they were obliged to smother their resentment till the next. But they would be revenged, and sundry short thick sticks and some elastic birch boughs testified their purpose.

In the evening Mr. Weston received a note containing these words: "An attack is meditated on Arthur Anderson. He should not go home alone for a night or two." The teacher perceived the import of the note, and the next night prepared to accompany Arthur home, without hinting his suspicions to any one, however.

Nothing happened to confirm his suspicions, and he began to think his fears groundless; but had he examined a thicket which he passed, and seen the two angry faces that peered out on him, and the looks and gestures, as he went by, he might have thought differently.

Things went on smoothly for a week or more, for the boys felt they were watched, and that their plan was suspected, if not known, and they concluded Bernard Harmor had divulged their secret.

But one night as Arthur was crossing a field on his way home from a neighbor's, a stone whizzed past his head. Turning around to see from whence it came, he received a severe blow from John Ferris, who was armed with a stout stick. Having nothing to defend himself, Arthur endured for a time the assault; but at length he seized a stick from William Jones and, retreating rapidly, told the boys he did not wish to strike them, but he should defend himself at all hazards.

Regardless of what he said, they rushed upon him, and by their united strength overcame his resistance and beat him unmercifully. When he reached home he was completely exhausted, and for several days was con-

fined to the house, being so severely bruised.

But this time the boys fared worse than before, receiving a punishment that made them feel and remember that the "way of the transgressor is hard."

Winter came, and many were the parties for skating on the ice, among whom none were more active than John and William, who, though they dared not molest Arthur again, still looked on him with dislike.

One day a large party was skating on a pond whose extensive surface offered great inducements to boys. Suddenly a cry of horror arose, then a supplicating shriek for help. The ice had broken, and John Ferris, William Jones, and Bernard Harmor had gone down. The poor boys were clinging to the edge of the ice, but John was nearly exhausted, having sunk once, and now supported himself with difficulty.

With one short, suppressed cry, Arthur Anderson caught his knife, cut the bands that fastened the skates to his feet, seized a large sled they had brought with them, fell on his knees, and saying, in a low tone, "Follow me, some one," crept to the edge of the ice and dropped the sled into the water. The poor fellows grasped it with all the energy of despair, and the remaining boys, at first paralyzed with terror, imitated the example of Arthur, and in a short time their three comrades were safe upon the ice, though almost lifeless.

By this act Arthur bound his friend Bernard to him by still firmer ties, and proved to his former foes that there is a noble revenge—a revenge which was sufficient to work their reformation.

Be ashamed of nothing but your own errors.

## ADVICE FOR THE YOUNG.

**S**ELDOM have we seen any advice for the young that gave us so much satisfaction as the following. We can not tell our young readers who wrote it, but it is so good, we hope they will read it very carefully, and try to remember all that it says to them:

There are some things you must not do if you mean to be true scholars. You must not spend your leisure hours about taverns, or stores, or shops. You must not waste the long and fruitful evenings in noisy, vulgar plays in the streets, with the profane, the dissolute, the reckless, calling after strangers, and annoying peaceable citizens.

You must not be ashamed to be polite. A coarse, gross, rude address never expresses a delicate, thoughtful, well-regulated mind. You must not be afraid to be right. Boys are often tempted to show their courage by ridiculing merit. They sometimes think it mean to be afraid of offending their parents, or their teacher, or God himself. Remember, that true spirit consists in following the dictates of a noble nature; and that he is the real coward who can be shamed out of his principle.

You must not find your best pleasures away from your own homes. I am always afraid of a boy who begins to be uneasy at home. When the presence of your parents and your sisters puts a restraint upon you, and you feel shy of them, be sure all is not right.

An uncorrupted and unperverted child is nowhere so happy as at home. Never suffer yourself to lose, never allow any body to taint in your bosom, the fond and kindly affections that grow up and shed their odors round the family fireside.

You must not imagine that you and your teacher have different interests.



He labors for you—he lives for you. His interest is for your welfare. His honor is in your progress—his happiness is in your highest good. If you could disturb his plans, and hinder his success, you would triumph in your own defeat.

You must not tempt others to do wrong. It is enough to lose advantages for one's self; to fail of the great ends of all education. To be the occasion of misleading and injuring another, to set about corrupting an innocent mind, to lure a guileless, confiding child from the path of purity, to estrange an affectionate nature from the love of truth and the sacred endearments of home, is a deep, deep guilt, and a malignant influence.

To you all let me say, Be punctual. If a scholar is late, the whole school is disturbed; his own progress is interrupted; the order of the day is interfered with; and, what is worst of all, a habit of punctuality is not formed—a habit essential to the success and happiness of life.

"*A little too late,*" is a fit motto to be inscribed upon the tombstones of half the unfortunates in the business of this world, and of more than half who fail of the happiness of the future.

Take pains to comply exactly with the regulations of the school. Confide in the teacher; respect the opinions he has deliberately formed; suffer him to rule within the sphere of his duty. Be not in haste to advance. Cultivate carefully the ground you go over; be sure you obtain distinct, clear ideas, and dwell upon a thing till you master it. Then, and not till then, you may safely advance.

Let others be in this class, or that, upon this or the other study, using such and such books, it matters not to you; if you are not prepared for them, they are not the class, or the study, or the books for you. To be put into them would only embarrass

or confuse you, and tend to defeat the best objects of a good education.

Don't whisper; don't whisper. One thoughtless boy, one careless girl, may, by this one mischievous habit, disturb a whole school. Learn to study without *buzzing*; to think without moving the lips. It is easy after a little practice. Indeed, to be able to be *still* is almost a virtue, it is so necessary to order. Certainly, it is one of the *graces*.

A boy who can sit still and stand still, without twisting or wriggling, or fumbling in his pockets, or drumming with his feet or his fingers, has made a good acquisition. He can move with ease, and speak with composure. He can appear in a room full of company without feeling embarrassed, and rise or sit down without awkwardness.

Never make light of a serious subject, nor trifle with the misfortunes of a fellow-creature. Never take pleasure in inflicting pain.

Never sneer at a tender conscience, nor laugh at the scruples or the weaknesses of a pious heart. Contempt for principle is an affectation; nobody really feels it; and simple goodness is too rare not to be prized and cherished wherever it appears.

Do not think that I am trying to persuade you to put on the soberness and gravity of age, while you are yet children. I know all about the vivacity, the sprightliness, and the buoyancy of youth; and I love them. I would not have "*a child,*"

Whose blood is warm within,  
Sit like his grandsire,  
Cut in alabaster."

But spirit, gayety even, is not vice; freedom is not folly; your presence may be all cheerfulness, your life all sunshine, and yet not an impure or unkind word may escape your lips; not an ungente action mar your example, nor a guilty passion corrode your bosom.

## Natural History.



### THE WEASEL.

BY HENRY WILSON.

**W**EASELS are found in all parts of the world, but they are the most abundant in northern latitudes. The *Common*, or *Ermine Weasel*, is familiar to our readers, as it is seen in nearly every portion of the United States.

It is about one half the size of a cat, has a head like a fox, a long, slim body, short legs, and a tail like a cat, though shorter in proportion to the size of the animal. In the summer its body is reddish brown above, and white beneath, with the extremity of its tail black. In the winter the color is changed, and the whole is a yellowish white. This change is probably

produced by a growth of new hair which supplants the old red ones as the cold weather approaches.

This Weasel frequents stony places, thickets, and barns, where it can find a secure retreat. Its agility enables it to outstrip the dog, and its slimness allows it to enter any hole through which it can thrust its head.

It preys on birds, and sometimes attacks poultry, or sucks eggs, and is an inveterate enemy to rats, mice, and moles. Young rabbits and hares also frequently become victims to its rapacity, and even full-grown ones are sometimes destroyed by it. Generally it does not hunt by scent, yet

it has been known to trace its prey like a dog.

Its motions are elegant and extremely quick, and its appearance very animated. It moves by leaping, or bounding, and is capable of running with great speed. Under the excitement of pursuit its courage is surprising. It will then attack, seize by the throat, and cling to a grouse, rabbit, or other animal strong enough to carry it off.

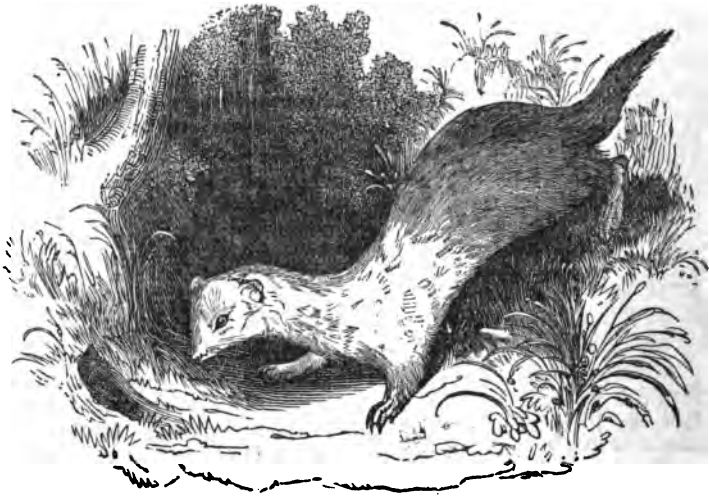
Sometimes, when met in a thicket, or stony place, or on a fence, it will stand and gaze upon the intruder, as if conscious of security in its own agility, though the person may be aiming his gun at him.

The cut at the head of this article represents a *Hawk pouncing upon a Weasel*. The hawk, seeing the Weasel prowling about the grass in search of moles, flew down to make a dinner

of him. The Weasel seemed to think he would stand as good a chance for obtaining a meal as the hawk, and so awaited the result.

The hawk seized him with his claws, and bore him up in the air; but no sooner had he touched the Weasel, than this cunning animal thrust his head under the hawk's wing, and with his sharp teeth commenced his meal. The hawk soon found that he had not "caught a weasel asleep," and tried to peck him with his hooked bill, but it was of no use.

The Weasel made the most of his time by sucking the hawk's blood, till the bird was exhausted, and came wheeling down, falling dead upon the ground. By this time the Weasel had obtained an excellent dinner at the expense of the hawk, and ran away none the worse for his ride through the air



THE FERRET WEASEL.

This Weasel is supposed to be a native of Africa. It is domesticated in Europe, and used for hunting rabbits, by sending it into their burrows and driving them out. This Weasel is principally of a yellowish white, with pink eyes.

In many respects the Ferret is similar to the *Ermine*, or *Common Weasel*, but it is more bloodthirsty. It is capable of a certain degree of tameness, yet it seldom, if ever, becomes attached to its owner, and is a dangerous inmate of the house, unless

properly secured. It has even been known to attack an infant which had been left unguarded in a cradle. Its ferocity was such, in this instance, that even after it had been driven away, the cries of the child brought it from its hiding-place, eager to renew its attack.

These Weasels are usually kept in boxes, and when sent into the rabbit's burrow, are muzzled. This is done by tying a soft string around the neck, close to the head, leaving two long ends; another string is tied around the under jaw, being passed under the tongue, then brought over the upper jaw and there tied, leaving the ends long as before. Then the four ends are brought together and tied in one knot on the top of the head.

By this process the mouth is kept closed, and all is safe, without injury to the animal. In this muzzled condition the Ferret will hunt as eagerly as if it were not muzzled.

The principal species of the genus Weasel are—the Ermine, or Common Weasel, the Marten, the Mink, and the Sable. All of these animals have a disagreeable odor, which proceeds from peculiar glands, and which is stronger in summer than in winter.

The Marten resembles the Weasel in form, but it is larger, and of a brilliant brown color. The fur of this animal is used to a great extent. Many thousand skins are sold each year by the Hudson's Bay Fur Company. These are often dyed to represent the skins of the Sable, which are more valuable. This animal is often met in the vicinity of farm-yards.

The Mink is of a chestnut brown color, and about twenty inches long. It is found on the banks of streams, and feeds on fish, frogs, poultry, rats, mice, and eggs of tortoises. Its fur is used by hatters.

The Sable is about eighteen inches long, and of a brown color. It is an

inhabitant of Siberia and Kamtschatka, but is very rare in North America. The fur of the Sable is considered the most valuable kind. The price of a single skin is from five to fifty dollars, according to the quality. The blackest are deemed the best.

## CHILDHOOD.

CHILDHOOD, sweet and sunny childhood,  
With its careless, thoughtless air,  
Like the verdant, tangled wildwood,  
Wants the training hand of care.

See it springing all around us,  
Glad to know, and quick to learn,  
Asking questions that confound us,  
Teaching lessons in its turn.

Who loves not its joyous revel,  
Leaping lightly on the lawn,  
Up the knoll, along the level,  
Free and graceful as a fawn?

Let it revel! it is nature  
Giving to the little dears  
Strength of limb and healthful features,  
For the toil of coming years.

He who checks a child with terror,  
Stops its play and stills its song,  
Not alone commits an error,  
But a great and moral wrong.

Give it play, and never fear it—  
Active life is no defect;  
Never, never break its spirit—  
Curb it only to direct.

Would you dam the flowing river,  
Thinking it will cease to flow?  
Onward it must go forever—  
Better teach it where to go.

Childhood is the vernal season:  
Trim and train the tender shoot;  
Love is to the coming season  
As the blossom to the fruit.

Tender twigs are bent and folded—  
Art to nature beauty lends;  
Childhood easily is molded;  
Manhood breaks, but seldom bends.

*Selected.*

## PHYSIOLOGY—NO. I.

## INTRODUCTION.

BY T. ANTISELL, M. D.

**P**HYSHIOLOGY is the Science of Life. By this term we mean a certain number of phenomena which manifest themselves in succession for a limited time in organized bodies.

Life is a first principle in nature. In the animal and vegetable kingdoms it presents considerable difference in degree. Its character in the vegetable creation is more uniform, and its phenomena more simple. We perceive in that kingdom, under the usual favoring circumstances, the vital operations of digestion, circulation, respiration, and assimilation go forward.

As soon, however, as the exciting causes are withdrawn, this principle subsides to a state of less activity, as in winter. The sound condition of such organs and textures as are necessary to the growth and propagation of the species is merely preserved by its influence until a returning impulse excites its energies.

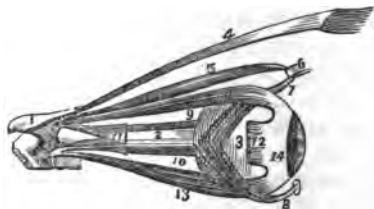
As we advance in the scale of creation the operations of the vital principle become more distinct and numerous, and the mechanism provided for the performance of them more manifest and complex, and as they are performed in man, and the more perfect animals, constitute the discoveries of physiology.

In the human eye we perceive many proofs of the advance in the organization of one class of creation over another. It is reasonable to believe that some animals not possessing eyes are yet conscious of the presence of light, though unable to recognize a single object, while to others are given an optical instrument of such beauty and perfection as to excel all artificial imitations.

In some classes of animals the eye

is fixed, by which a limited range of vision only can be had, and the animals require to turn the body or the head to enlarge it. In the higher animals, and in man, this necessity is to some extent removed by the faculty afforded to the eye of rolling about.

This motion is accomplished by one of the eight muscles which move the eye, called the *pulley* muscle, from its passing over and playing on a ligament which acts as a pulley and alters the direction of the power of the muscle, enabling it to pull the eye downward and to one side, thus rolling the eyeball round. The following cut illustrates the action of this muscle, which is marked 5 and 7.

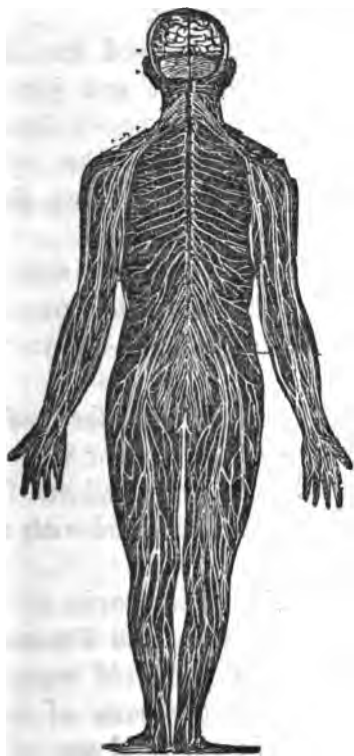


The proneness of matter to change, which results in death, occasionally, even during life, appears to overbalance the vital power; some minute change in the nature of an organ occurs, it no longer performs its office as it should do, and it becomes *diseased*. Disease, then, is the overbalancing of the vital power by the more general law of progressive change.

To restore this organ to its primitive healthy structure and function is the *practice of medicine*; and when healthy, to keep it in its true tone and function by preventive measures, as by regulation of diet, exercise, climate, and general regimen, constitutes that important science called *Hygiene*, which is now demanding so much general attention in its application to public health, especially in large cities.

It is, however, a knowledge which every individual ought to possess, as his personal comfort and well-being de-

pend much upon its possession. It can not be understood without a fair knowledge of anatomy, or the description of the structure of the various parts of the body, and of physiology, or a description of the uses or functions which these several parts play. It is our purpose to give a series of articles in the Student, to convey to our readers a general view of the most important functions of the human frame.



Can any thing be more wonderful to the uneducated than that which is known as sympathetic action of the human frame? When a person receives a blow upon the head his stomach becomes sick; when the sun glares upon his eye he may sneeze; when an agreeable dish is presented the mouth waters. All this is produced by this sympathetic action.

Yet to him who studies the nervous system in its minute distribution, connecting the most distant parts of the body together, the wonder of this action is lost in admiration. This intimate relation of all parts is seen in the above view of the nervous system. It will be seen that the nerves unite in the brain and the spine, and form a bond of connection between the external world, and the internal organs.

As a machine can only be thoroughly known after it has been taken to pieces, down to its simplest elements, so with the human body—it requires to be studied to be known, to be known to be admired.

“What a piece of work is man! \*\* In form and moving how express and admirable! in action how like an angel! in apprehension how like a god! the beauty of the world, the paragon of animals!”

*Shakspeare.*

[*Res-pi-ra-tion*, breathing. *As-sim-i-la-tion*, the changing of the food we eat into substances that form our bodies.]

TO STUDENTS IN GRAMMAR.—When the seats in a school-room are so high that the children can not reach the floor with their feet, and so narrow that they have to hold on with both hands, is the verb “to sit” a *neuter* or an *active* verb?

RULING THE WAVES. “If Britannia rules the waves,” said a sea-sick man during a storm, “I wish she’d rule them straighter.”

REASON loses the race if it sits in meditation on the fence while competition rushes by.

BETTER have a trade than an estate; one may be *lost*—the other is always *at hand*.

HE who enlarges his heart restricts his tongue.

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### THE BOYS AND THE BEGGAR WOMAN.

**O**N a fine day in Oc-to-ber, Pe-ter, Thom-as, and Jo-seph went a-way in the morn-ing to play.

They were quite glad be-cause they were al-lowed to play to-gether on such a pleas-ant au-tumn day.

They wan-dered a-bout in the fields and saw the ripe corn, the yel-low pump-kins, and the cows and sheep feed-ing in the pas-ture.

They lift-ed the large pump-kins to see which could lift the larg-est one. Some-times their hands would slip off and they would fall over back-ward.

Then they shout-ed and laugh-ed and thought it was nice fun.

Mr. Good-man was the farm-er's name who owned the fields where the boys were, and he gave them lib-er-ty to pick as ma-n-y ap-ples as they want-ed to eat.

The ap-ples were ver-y nice and mel-low, and had fall-en from the trees in rich boun-ty. The boys were glad that Mr. Good-man was their friend.

Af-ter a long time they were tir-ed. The sun be-gan to sink

near-er the ho-ri-zon, and ap-pear more and more red as he ap-proached his hid-ing-place in the glo-ri-ous west.

The boys start-ed for their homes, with light and joy-ous hearts. The sky nev-er looked bright-er to them, than when they were leav-ing their day's sport.

No one of them had spok-en a hard word since his moth-er told him in the morn-ing to "be a good boy."

They had not gone far be-fore they met an old beg-gar wom-an. Her hair was gray, and her face wrink-led, and cloud-ed with sor-row.

She said these words to Pe-ter, and Jo-seph, and Thom-as:

"I am a poor old wom-an. I have seen the suns of four-score years rise and set. The frosts of eighty win-ters have fall-en upon my locks, and they are white.

"I have known troub-le, and care, and great sor-row. My poor moth-er died when I was but three years old, and I was left home-less in a cold, rude world.

I have wan-dered far and near, and can find none to help me. I have no bread, and no mon-ey to buy any.

"My lit-tle lads, I tell you a true sto-ry. I have no friend to help me in my pov-er-ty and mis-er-y.

"Can you not give me some mon-ey to buy food with? God will bless you for help-ing a poor, help-less one, and re-mem-ber your kind-ness in heav-en."

Now we will see which of the boys was wis-er and bet-ter than the others. The hand of Jo-seph was quick-ly in his pock-et, for he had a gen-er-ous heart.

"I will give you some mon-ey. I will give you all I have," he said, ea-ger-ly.

"You shall not starve; my fath-er's house is but a lit-tle way off; you shall go and stay to-night, and shall have mon-ey, and bread, and a warm bed to sleep in. I know you will not be turned a-way. Come with me!" Thus spake the no-ble boy.

How was it with Pe-ter and Thom-as? They did not give her mon-ey; they did not show any pit-y for her; but they said she was ly-ing to them, and they would not give her a cent.

They want-ed their mon-ey to buy can-dy and nuts with. And they told Jo-seph he had bet-ter

keep his and buy mar-bles with it, or some-thing nice to eat.

But Jo-seph said, "No; I will give it to the poor wom-an." So he gave her all he had, and she went to his home with him, where she was treat-ed ver-y kind-ly.

Jo-seph's fath-er and moth-er, the ver-y next day, gave him twice as much mon-ey as he gave the wom-an, and praised him for be-ing such a good boy.

Thom-as bought can-dy with his mon-ey, and it made his teeth ache, and de-cay more and more. They were al-read-y much de-cayed.

In a ver-y short time he had to have them pulled out.

Pe-ter bought a lot of nuts with his, and ate so man-y that they hurt him ver-y bad-ly. Soon he was ver-y sick, and when the doc-tor came to see him, he said that Pe-ter had a fe-ver.

Poor Pe-ter had to lie in bed eight or nine weeks, and ev-er-y bod-y thought he would die.

But at last he got well; and when pale Pe-ter and, tooth-less Thom-as next met to play, they con-fessed to each oth-er that they had been *cru-el* and *fool-ish*, while Jo-seph had been *kind* and *wise*.

Lit-tle read-er, are you like Jo-seph, or Pe-ter, or Thom-as?—*Selected.*



## AUNT ELIZA'S STORIES,—No. VII.

## MINNIE'S PET.

**A**MELIA MOORE was one of the funniest little girls in the world. She was about six years old, and though not very handsome, she was so cheerful and good-natured she always looked pretty, and every one loved her.

You never saw her look as if she could bite you; you never heard her snarl like a cross dog, nor speak so short you would think she was afraid of the words.

You never knew her to shut a door so the house would shake. O no; Minnie, as she was called, was a sweet little thing.

Her sister Celia used to call her "Violet," because she said the violet bloomed as sweetly by a snow-bank as in the summer time, and Minnie was sweet-tempered at all times. So she always said, "Minnie, my Violet."

Minnie had a lamb, a snow-white lamb, which she loved better than any thing in the world, her family excepted. The lamb's name was Lily, and one of Minnie's funny notions was, that it could understand what she said to it.

She would speak to it, and the

lamb would raise its head. This, she said, was saying "Yes;" and when it looked down it said "No."

"Lily," she would say, "shall we go to the willow tree?" and Lily would look up. So off they would go, and then Minnie would say, "Lily, shall we get some apples?" But Lily would be busy eating the sweet clover and tender grass, and Minnie would think the lamb said "No."

At times she would say, "Lily, I want you always to do right. I hope you will never pain me by conducting in an improper manner;" or, "Lily, I wish you to correct one bad habit. You stamp very impatiently sometimes. Now if you will be good, I will take you out walking with me."

But one night Minnie came home from school looking quite sad and *almost* vexed; "Mother," said she, "I wish you would keep our Allan home a few days."

"Why, my dear," said her mother, "what has he done?"

"He teases me, and makes the scholars tease me too," said Minnie.

"How does Allan tease his little sister?"

"He tells the scholars how I manage Lily, and they say,

"Minnie Moore, Minnie Moore, does your lamb study geography yet?" Now, mother, our Allan is very much to blame, for he told them about it."

"About what, my dear?"

"Why, mother," said Minnie, blushing, "you know Lily is so good and gentle, and learns so quick, I thought I would teach her something useful."

"I asked her if she would like to study geography, and she said she would. So I took my map, and was pointing out the countries, when I heard such a laugh; I started, and there stood brother Allan laughing as hard as he could."

"Europe, Lily, this is Europe," said Allan, bounding past the door, and Mrs. Moore herself could not help smiling at Minnie's notions.

She had often told her that Lily could not learn, but Minnie did not understand why, so she merely said, "I will talk to Allan, dear, and he will tease you no more."

Allan did not mean to hurt his sister's feelings, but it was so funny to hear her talk to her lamb, and when his mother told him how his sister felt, he was very sorry, and the next day when he went to school, he said to the scholars,

"It is too bad to laugh at Minnie, for she is a very little girl, and she did not know I heard her talking to her lamb."

So they agreed not to tease her any more, and all felt much happier than they did the day before, when little Minnie looked so sad.

That night when she came home she said, "Mother, our Allan has been a real good boy to-day, and I mean to give him my pretty sea shell."

You may be sure Allan never teased Minnie about her lamb after that.

#### FORFEITS.

**RECOLLECT** when I was a boy, a plan which used to be adopted in my father's family, at the return of the holidays, which was found to be very useful.

It was this. We each of us agreed to forfeit one cent for every ungrammatical or improper expression which either of us employed in conversation. The money thus obtained was devoted to the promotion of benevolent objects.

An account was kept of the mistakes and errors which any of us made; and thus we were enabled to ascertain the faults which we most commonly com-

mitted, and guard against them with the greater care.

By these plans we were led to think before we spoke; we were mutual checks against improprieties; and we gradually found that the style of our common conversation was much improved, and our knowledge of grammar increased.

I have lately, in conjunction with some friends, adopted nearly a similar plan with respect to early rising, by which many valuable hours have been redeemed from sleep.

We have agreed that each of us should keep a regular daily account of our time of going to bed and of rising; and that every individual who slept longer than seven hours should forfeit one penny each morning.

When we meet together, which is generally once a week, we compare accounts, and put the money into our Sunday-school box.—*A Present to the Young.*

#### WHERE IS UNCLE ROLLO?

**M**R. EDITOR,—I do not know much about writing to editors, but I want to ask you what has become of Uncle Rollo?

It has been a long time since you have printed any of his ad-

vice in *The Student*. I hope you will tell him to give us more, for all the children here love to read his advice so well.

We all like aunt Eliza's Stories, too, and we like her because she tells us one every month.

Now do give us more of Uncle Rollo's Advice; I hope he will talk to us about a great many things. Your friend,

EDWARD.

We are pleased to hear from our friend, Edward, and we promise him that Uncle Rollo will give more of his advice, next month.

If our young friends are so fond of his advice, we hope they will try to improve by it, for we are sure that Uncle Rollo is their friend, and wishes to do them good.

He is fond of children, but he likes those who do right, and who try to learn, better than he does those who are bad.

Good children never insult persons who pass along the street.

They are obedient to their parents and teachers, and kind to their playmates.

They do not quarrel, or fight; bad boys do these things.

## Drawing Department.

### NOTICES OF EXCHANGES.

SINCE issuing the last number of The Student, drawings and leaf impressions have been sent us from several schools.

From the "Jamestown Female Seminary," at Jamestown, Chautauque Co., N. Y., Miss Clarissa D. Wheeler, principal—Ann Elmena Salisbury, aged 14; Marion Eddy, 14; Emmagene Gillett, 12; Mary G. Blanchard, 9. Please to tell your pupils, Miss Wheeler, those drawings were so good that we wish more of the same kind.

From the pupils of Mr. George H. Stebbins, public school, Brooklyn, N. Y.—Wm. B. Bodge, aged 12; George B. Stayby, 12; Charles Hammon, 9. We hope to receive more drawings from these pupils, also some from others attending Mr. Stebbins' school.

From "North Branch Academy," North Branch, Somerset Co., N. J., Mr. J. N. Voorhees, principal—Thomas E. Bartow, aged 15, sent us a portrait of Thomas Corwin, of Ohio; also one of "Jenny Lind, the Swedish Nightingale." They were both drawn with a lead pencil, and exhibit skill and taste. With practice, Thomas, you may do well. Shall we not hear from this school again, and from more of its pupils?

From the pupils of Mr. Arthur B. Noll, New Germantown, N. J.—Gertrude Simonson, aged 19; Emily L. Van Derbeck; Margaret Miller, 14; Elizabeth Craig, 10; Phebe H. Noll, 13; Ann G. Melick, 12; Mary E. Rosenbury, 12; Margaretta Craig, 11; Robert Honeyman, 13; James C. Gulick, 12; John C. Kline, 10. The drawings from these pupils do them credit; however, we hope Mr. Noll will send us those better ones.

From the pupils of the "Harrisburg North Ward Male High School," Mr. E. L. Moore, teacher, Harrisburg, Pa.—J. M. Duncan, aged 13; W. Brenzer, 15; H. Klein, 13; C. Wallace, 14; Wm. Lukens, 13; George Fisher, 12. The drawings from these pupils were received in September, and should have been noticed in the October number, but were overlooked through mistake. We hope Mr. Moore will let us hear from him again.

Another of those large packages has just been received, composed of pencil drawings, leaf impressions, maps, paintings, and specimens of penmanship, from the pupils of Mr. J. M. Horton, North Castle, Westchester Co., N. Y.

This package contained *one hundred and ten* specimens, all prepared by about *eighteen* pupils. *Twenty-five* of these specimens were leaf impressions, *ten* of which were letter sheets, containing from ten to twenty impressions on each sheet. In the whole there were 168 leaf impressions. There were *twenty-one* specimens

of penmanship; *forty-one* pencil drawings; *fifteen* paintings; and *eight* maps. This, we believe, is the largest package we have received from one school. Yet the merit of these specimens consists not alone in their numbers, but chiefly in their good execution.

The drawings, maps, and paintings, which we receive from the pupils of Mr. Horton, are among the very best sent us. Their first efforts were like those of others; but they have persevered nobly in this department, and success has been their reward. What they have done the pupils of other schools may also do; and we would that many others might be stimulated to do likewise. We omit the names of these pupils, as they were published in the number for September.

We should be happy to comply with your request, Mr. H., and publish the names of those who are entitled to The Student from having sent us five sheets of leaf impressions; but we have kept no other record of them than to enter their names in the mail book, as they complied with our offer; consequently, we have no means of ascertaining who they are. Tell Miss Mary Purdy that she is entitled to The Student from May, 1850, to April, 1851, inclusive.

From "Willow Grove School," Fall River, Mass., Miss Eliza M. Clark, teacher—Harriet R. Hawkins, aged 12; Marietta M. Howard, 11; Abby C. Allen, 11; Julia A. E. Haswell, 11; Eudora S. Borden, 11; Garaphelia G. Howard, 9; Wm. H. H. Borden, 10; Emma C. Borden, 8; Matthew C. D. Borden, 8; Annie G. Durfee, 8. The drawings from these pupils are very creditable for beginners. Those "preserved leaves" would be very acceptable.

From School District No. 8, Ramapo, Rockland Co., N. Y., Mr. J. C. Balsdon, teacher—Ann E. Lake, aged 12; Catharine Conklin, 11; Lucinda Gurnee, 10; E. Maria Gurnee, 10; Caroline Lydacker, 9; Caroline Ackerman, 9; S. J. Conklin, 8; Wm. H. Sherwood, 13; Alvin A. Johnson, 12; Samuel F. Allen, 9; Nicholas Forshee, 10; Albert Lydacker, 10. We think these pupils are making good improvement in drawing.

We have received a few pencil drawings from E. H. Pollard, aged 13, and M. E. Pollard, aged 11, of Henniker, N. H. We are glad to see that these, too, are improving.

From most of the leaf impressions sent us we should judge that too much ink was used; it requires but a very little to obtain a good impression. Some, too, think that printer's ink is too thick, and reduce it with spirits of turpentine: this is wrong. The ink is ready for use as it is obtained from the printer. By following the directions laid down in the numbers of The Student for June and August last, and a little, careful practice, good impressions can readily be obtained.

# Phonography.—Lesson 7.

BY C. J. HAMBLETON.

## HALF-LENGTH CONSONANT SIGNS.

For the sake of greater brevity and elegance in writing, *t* and *d* are added to the consonants by making them half their usual length. As a general thing the whispered sounds are followed by *t*, and the spoken ones by *d*, as: *cut*, *good*; but for greater convenience *t* is often united to the heavy stems, and *d* to the light ones, the sense always deciding which it is. *L*, *r*, *m*, and *n* are always made heavy for a following *d*, and light for a *t*.

When a vowel comes after a half-length stem, it is read after the primary consonant, and before the *t* or *d*, thus, *feet*.

The circles and hooks are made to the half-length consonants in the same manner as to the full length ones, and the *t* and *d* are read after the hooks at the ends of the stems, and before the circles. Examples: *spread*; *treat*; *shrewd*; *gent*.

When standing alone, *p*, *b*, *ch*, and *j* should not be made half length, as they will interfere with word-signs, to be explained hereafter. When a vowel follows *t* or *d*, at the end of a word, the alphabetical sign should be used instead of the half-length, as, *guilty*; and also when the half-length stems can not be readily vocalized, or do not form a distinct angle when joined to the other consonants. When one or both, *t* or *d*, occur three times in succession, one is generally written of full size and the other two of half-length, close to the former, thus, *attitude*.

*A list of words for the student to write, applying the principles just explained.*

Spite, dispute, better, beautiful, committed, afforded, aged, fight, observed, thought, wisdom, lately, delight, solid, heart, soured, omits, consumed, insects, west, dreadfully, mad.

Haste makes waste. Seek wisdom, and you will certainly find her. A soft and kind answer turns away wrath. Kindness melts a hard and ice-cold heart. Either be silent concerning the absent, or speak as a friend.

## WORD-SIGNS.

In the common style of phonography there are about one hundred word-signs, used to represent

the most frequent words of the language, which greatly adds to the brevity and facility of writing phonography, without detracting from its legibility. By a word-sign is meant a single sign to represent an entire word.

In most cases one of the letters or characters of the word to be thus represented is used; for instance, the consonant-sign *v* stands for *have*, and *t* for *it*. Some of the vowel-signs and the horizontal consonants are used in two positions—on the line and above it, and the same character represents different words when placed in different positions, as, *k* above the line stands for *kingdom*, and the same sign on the line for *come*. In the list below the two words thus represented by the same sign are placed in a bracket opposite the word-sign, it being written above the line for the top one, and on the line for the lower one in each pair.

Occasionally the same sign in the same position represents two words, but in reading the context will always tell which it is.

## VOWEL AND DIPHTHONG WORD-SIGNS.

the	or who	what
an, and	on should	would, wood
all to	how	you, your
of but	with were	

## SIMPLE CONSONANT WORD-SIGNS.

up	for	will
be	have	are
it	think	me may
do	them	in no
which	so	thing language
advantage	was	
kingdom come	shall	
give-n together	usually	

## Editor's Cable.

### TO OUR READERS.

You have a synopsis of our course, and of what we intend presenting for your perusal during the present volume, in our new prospectus; yet a more definite statement of our views, in relation, to the matter which should appear in *The Student*, may not be amiss here.

It is not our desire to attempt a display of originality, and claim to admit nothing into our columns which has ever appeared in any other journal or magazine, regardless of the exceedingly valuable articles that may thus be rejected. Yet we shall aim to present that which will, for the most part, be new and fresh to our readers.

We shall not only use choice articles from other serial publications, but whatever books may be issued, from which we can gather new principles in science, and interesting facts, shall also be made to serve in adding to the usefulness of *The Student*; for in our sphere of labor we consider it of vastly more importance to be correct than original, and of far greater service to our readers to present them with truly valuable knowledge, though first contributed for other works, than, for the sake of originality, to offer nothing but what is claimed to be written expressly for our columns, and thus oblige ourselves to reject articles which would be much more interesting and useful.

The greatest amount of important instruction in the least possible space, is our aim. Yet *The Student* is far from being a mere compilation, as the greater portion of our articles are written for it. Whatever appears in it that has been copied from something else, is either credited to the source from which it was obtained, or introduced by some editorial remarks, or marked at the close thus—*Selected*.

**TO TEACHERS.**—Are your pupils tardy in getting their seats after the bell rings for school? Spend the first five or ten minutes in telling or reading to them an interesting story, or some valuable historical anecdote. Do something to make them love the school-room more than play, and they will be prompt. Study to please the children and gain their love, and your labors will be pleasant. Do not let them leave the school-room at the close of a single

day, without carrying with them something that they did not know when they entered in the morning.

**PANORAMAS.**—By the means of moving panoramas we are shown, upon canvas, views of beautiful landscapes, magnificent rivers, the scenery of foreign climes, the prominent views of a voyage by sea, or an overland journey; and so vivid is the impression left on the mind, that when reading of these places afterward, we almost imagine we have visited them. Thus, much valuable information may be gained of the inhabitants, architecture, foliage, and general scenery of a country which we have never seen—information second only to that obtained by an actual visitation of the place. Besides this, they serve as a place of wholesome, intellectual amusement.

Such a place would give a class of pupils a better knowledge of the true geography of a country by one visitation, than the study of books alone could give in a month; it makes an impression never to be forgotten.

"Sounds which address the ear are lost and die  
In one short hour; but that which strikes the eye  
Lives long upon the mind; the faithful sight  
Engraves the knowledge with a beam of light."

Loomis' Panorama of Cuba, at the Minerva Rooms, 406 Broadway, New York, portrays in an excellent manner the beautiful scenery of that island, with its delightful climate, its Spanish buildings, coffee and sugar plantations, the luxuriant vegetation, and other striking features of a tropical country.

**MUSIC.**—The music in this number was sung at the closing exercises of the New York State Normal School, October 8d, 1850. Mr. Bowen kindly furnished us with a sheet containing "The Teacher's Life," and "Earth hath no Joy that's Pure," which was published for the occasion. It may be obtained of A. HILL, No. 78 State street, Albany, N. Y.

**THE AMERICAN CABINET AND BOSTON ATHENÆUM;** a weekly of double quarto form, is the best literary and scientific family paper with which we are acquainted; but we are not quite as well pleased with its frequent absence from our table of late. Friend Mason, we can hardly believe you are at fault in our non-reception of your valuable paper—but why does it come to us so irregularly? As *studious* as we are, we like good company.

## NOTICES OF PUBLICATIONS.

**A NEW CHART OF CHEMISTRY.** By Mr. E. L. YOUNG, upon which the fundamental principles of the science of Chemistry are represented to the eye by diagrams and colors.

Here is one of the most ingenious and valuable scientific inventions to aid the educator which we have ever seen produced. A knowledge of Chemistry is one of practical importance in all the operations of life. It involves the conditions of health, life, and death, and is most intimately connected with agriculture and the manufactures, and with all the culinary operations of household affairs. And, notwithstanding it embraces such a vast fund of interesting and useful information, comparatively few only have as yet turned their attention to it. The reason is, it has been considered so difficult to understand, and of so little practical importance in life, that it has never been made a branch of popular education, like Geography, Astronomy, Philosophy, etc.

Heretofore it has not received that attention in education which it justly claims, and principally because no facilities had ever been devised for rendering the subject clear and simple. Then, too, its discovery is so modern that its real utility is just beginning to be appreciated. An effort has now been made to popularize and simplify it, and, as we believe, a signally effective one, presenting the student of chemistry with the same advantages that he enjoys in the pursuits of other sciences.

Mr. Young's Chart is to Chemistry what the Map is to Geography, or the Diagram to Astronomy. It presents to the mind, through the medium of the eye, symbols of objects which can not be seen in a simple condition, and so plainly represents the exact ratios of the simple substances in their several combinations, to form the various bodies we behold around us, that more real knowledge may be obtained from one hour's illustration from this chart, than from a week's study with the book only, and even more practical information than the student of chemistry usually obtains in several weeks.

It embraces the department of agricultural chemistry, now so justly attracting the attention of a very large portion of farmers. It represents the sixteen simple bodies which constitute the great mass of the earth's crust—the rocks and soils—together with the entire vegetable and animal kingdoms, and shows their relative quantities in weight by squares of different sizes, and the different properties of substances by colors. Then by lines the affinity of simple bodies is represented, and the whole is so clear, simple, comprehensive, and interesting that no one of ordinary capacities could fail to understand it.

The fact that it has been examined by Professors Stillman, Draper, Gray, Torrey, Hopkins, Ellet, Chilton, and Antiehl, and highly commended by each, is a sufficient guarantee of its scientific accuracy.

The Chart is *five feet by four*, well mounted, manufactured with great care, and accompanied by a pamphlet of explanations. Published and for sale by YOUNG and BUDSALL, No. 82 Nassau Street, New York.

**THE STUDENT'S SPELLING-BOOK**, by J. S. DENMAN, is a new candidate for public favor, and one well worthy of a careful examination. Please see advertisement on *fourth* page of cover.

**THE BOTANICAL TEXT-BOOK**, for colleges, schools, and private students. By ASA GRAY, M.D., of Harvard College. The third edition, re-written and enlarged, illustrated with twelve hundred engravings, has recently been published. 12mo. 520 pages. Price \$1.75. By George P. Putnam, 155 Broadway, New York.

This is decidedly the most comprehensive work on the science of Botany with which we are acquainted. We acknowledge ourselves most agreeably disappointed in the examination of it, and find its treatment of the science far superior, and more interesting, than we had imagined it. It is very unlike other works on this subject, for, besides giving the principles of systematic Botany, and an account of the chief natural families, it treats of the structure and physiological organization of plants.

It tells of what plants are composed, how they grow, and the uses of their various organs; also of the different salts and gases which different plants draw from the earth and air—information of far more practical value than merely to learn how to ascertain the class and family to which it belongs, and the name applied to it. The study of the science of Botany, as treated in this work, would be of great value to the farmer.

**GRECIAN AND ROMAN MYTHOLOGY**, illustrated. By M. A. DWIGHT. An abridged edition of Dwight's "Mythological Text-Book," designed for the use of schools. 12mo. 312 pages. Published by George P. Putnam, Broadway, New York.

Though this is an abridged work, yet it contains all the information necessary to the understanding of the Grecian and Roman Mythology. The plan of the work is well adapted as a book of reference.

We do not consider the study as one which should be introduced into common schools, whatever may be said of its usefulness in high schools, when properly presented. Other subjects of far greater utility to man than the ridiculous fancies of the heathen present stronger claims for the attention of the young.

**THE DAGUERREIAN JOURNAL**, devoted to the Daguerreian and Photogenic art; also embracing the sciences, arts, and literature. By S. D. HUMPHREY, editor and publisher, No. 235 Broadway, New York. Semi-monthly. 32 pages, octavo. Terms: \$3 per annum, in advance.

Here is a new journal, devoted to a new subject, and claiming to be the pioneer in a new field. Daguerreian artists, this is something for you—it promises you much valuable assistance in your art, and comes from one who is a practical and successful daguerreian. No. one of the first volume, commencing with November 1, 1850, is before us, and contains much practical information for those engaged in the profession.

**THE INTERNATIONAL: a Miscellany of Literature, Science, and Art.** Published by Stringer and Townsend, 222 Broadway, New York, at \$3 a year.

This work is no longer issued in weekly parts, but will hereafter make its appearance once a month, each number containing about 150 pages of choice reading matter. The October number is very interesting.

**HARPER'S NEW MONTHLY MAGAZINE**, No. 5, for October, sustains the excellent character of its predecessors.

**THE ILLUSTRATED DOMESTIC BIBLE**, published by Samuel Hueston, in parts, at 25 cents each. Nos. 7 and 8 have been received. We like the work better as it goes on.

## THE TEACHER'S LIFE.

Music by T. H. Bowen.

Poetry by Alfred B. Street, Esq.

Sing Small Notes second time.

1. { The Teach-er's life ! most pure and high, The open - ing mind with gems to store ;  
To up - ward point the wandering eye, When youth's frail bark forsakes the shore.

2. { The Teach-er's life boasts tru-est fame ! 'Tis not a - lone the mind to fill :  
The heart, God's greatest work, hath claim Up - on its high-est, ho-liest skill.

3. { The Teach - er's life ! not on - ly know Cit - ies the blessings by it shower'd,  
But where the fresh pure breezes blow O'er peace-ful fields and ways embower'd.

4. { The Teach-er's life ! 'tis not to roam In eye of man some towering hight,  
But in the val - ley of its home, For God's broad eye to shed its light.

The world its hol - low plaud - its bears To fame that's won a - mid its strife ;  
To guide its err - ing feel - ings right, De - stroy the weeds that spring so rife,  
How oft the mod - est school-house there Is seen ; far, far from bu - sy strife,  
T. S. How ma - ny, as they pass a - long, The snares within their way so rife,  
But deep-er, lof-tier praise is theirs, Who, honor'd, lead the Teach - er's life.  
While opening realms to mental sight, This, this, oh, this the Teacher's life.  
In God's own blessed sun and air, The tem-ple of the Teacher's life.  
With towering brow and footstep strong, Have cause to bless the Teacher's life !



## SCHOOL ORGANIZATION AND CLASSIFICATION.

THE following plan for organizing and classifying a school, is from a lecture delivered by Wm. F. Phelps, of the New York State Normal School, before the New York State Teachers' Association, in this city, August, 1850. We have inserted in this extract a diagram to illustrate the record of examination, and added a few words of explanation. The true principle of education is, "to adopt such means and methods as will call into vigorous and healthy exercise ALL the powers of both mind and body, each in its due degree." The plan of classification, as laid down by Mr. Phelps, we believe to be founded on that principle, and fitted to embrace a symmetrical and true education.

"It is the first day of school. The merry peal of the bell has summoned to the room a band of about fifty pupils, who have quietly taken the seats assigned them, and are attentively listening to a short but simple address from their new teacher. He tells them that they have met as strangers, but yet as friends; that he has been employed by their respective parents as their instructor and guide for the coming year; that he has come to do them good, to impart to them that knowledge which alone can make them good, and wise, and happy; that on his part, every thing will be done that can contribute to their welfare and improvement, and that on theirs he shall expect simple obedience and attention to study; that if called upon to inflict punishment, he shall be influenced only by a desire to do them good and discharge his duty.

"He then proceeds to the work of organization and classification. As a preliminary step, he selects a class of from fifteen to twenty of the older pupils, and after suggesting some way by which the remainder may employ their time, he commences a thorough examination of those before him, for the purpose of acquainting himself with their attainments and abilities. He is provided with a record upon which he notes the result of his examination of each pupil in the branches he has pursued.

"When the examination is completed, all that is necessary to decide the classification of any candidate is to sum up the figures opposite the name, when, if the sum is not below the standard number of any particular class, he is admitted to it. For example, if the number of branches in which the candidate is examined be six, and the highest digit used also be six, he would, if he passed a thorough examination in each, sum up thirty-six, which number will show that he was well versed in the studies he had pursued, and, consequently, that he was qualified to advance to higher ones. The teacher now decides that the number twenty-eight shall be the lowest average of his highest class, of which this pupil stands at the head. He next decides that twenty shall be the lowest average of his second class, and consequently, that all who sum up numbers from twenty to twenty-eight shall belong to that class, and so on to the end.

"But to return. After completing the examination of the fifteen or twenty first taken, he proceeds in the same way with another division, until the work is done. This preliminary step occupies perhaps the first two days; but when once accomplished, the teacher has before him a chart which exhibits with great accuracy the standing of each individual under his charge. He has not relied upon the judgment of his pupils, but has put their strength and requirements to the test. He knows whether or not that which has been done is thoroughly

done—whether any have expended their strength upon one department to the neglect of another; in short, he ascertains for himself the fact whether or not the whole standing of his pupils, so far as they have been instructed, is in accordance with his own high and intelligent views of education.

"This rigid scrutiny being ended, the pupils are informed by their instructor that the work of classification is now to be commenced; that he has satisfied himself as to their scholarship; that he is prepared to assign them such studies as the present stage of their development and their future good require; and that he trusts they will yield to his judgment the respect and deference that are due to his superior age and experience.

"They are then arranged, each in his place, to the number of about four classes, called A, B, C, D, etc., and all the studies required by the actual condition of the respective divisions are assigned them. The classification is made a general one, that is to say, each class is entirely distinct from every other. No member of class A is found in class B, C, or D, but each is kept under his own vine and fig-tree. Under such a system, it can seldom, if ever, be necessary for a pupil to change; for he who has mental strength sufficient to place him in class A, will be enabled to sustain himself in any study they may be pursuing, although he may be less familiar with it than his classmates."

Diagram of the record of examination :

Names of Pupils.	Studies Examined in.						Total Grade.	Class.
	S.	R.	Geo.	Ar.	Gr.	His.		
Wm. Jones,.....	4	3	4	2	1	3	17	C
Ellen Burt,.....	6	6	6	4	6	6	34	A
James Bruce,....	6	6	6	6	1	6	31	A
Mary Pratt,.....	5	4	4	1	3	5	22	B
Horace Day,.....	6	4	5	5	4	4	28	A
Joseph Lee,.....	5	5	4	2	1	2	19	C
George Brace,....	6	5	4	5	3	4	27	B

Thus it will be seen that Ellen, James, and Horace are placed in the A class in all the studies in which they have been examined. Though James is marked only *one* in grammar, which indicates that he possesses only a slight knowledge of it, yet the sum of his digits being over 28—the lowest average for the first, or A class—he is placed in that class in grammar, as well as in the other studies; and as he already understands the other branches so well, he will be required to devote the greatest share of his time to grammar, and thus be able to keep pace with the A class in that study. Mary and George are placed in the B classes, and William and Joseph in the C classes, in all the studies they pursue.

"The advantages flowing from this system must be obvious to all who carefully examine it. It enables the teacher to exemplify the great truth before mentioned, that 'Order is Heaven's first law.' It allows of no 'one idealism.' It permits alternate periods of study and recitation to all the members of each class, inasmuch as every pupil is confined to his own division. It promotes an harmonious development of the intellectual powers; and, in short, the more closely it be examined the more will it be found to accord with the unchanging principles which preside over the true education of the young."

# THE STUDENT.

## THE VALUE OF A GOOD REPUTATION.

BY JOHN MATHER AUSTIN.

**T**HE young live much in the future. They are fond of gazing into its unknown depths, and of endeavoring to trace the outline, at least, of the fortunes that await them. With ardent hope, with eager expectation, they anticipate the approach of coming years, confident that they will bring to them naught but unalloyed felicity. But they should allow their anticipations of the future to be controlled by a well-balanced judgment, and moderated by the experience of those who have gone before them.

In looking to the future, there is one important inquiry which the young should make: What do I most desire to become in mature life? What position am I anxious to occupy in society? What is the estimation in which I wish to be held by those within the circle of my acquaintance?

The answer to these inquiries, from the great mass of young people, can well be anticipated. There are none among them who desire to be disrespected and shunned by the wise and good; none who are anxious to be covered with disgrace and infamy; none who seek to be outcasts and vagabonds in the world. The thought that they were doomed to such a condition would fill them with alarm.

Every discreet youth will exclaim, "Nothing would gratify me more than to be honored and respected, as I advance in years; to move in good society; to have people seek my company, rather than shun it; to be looked up to as an example for others to imitate, and to enjoy the confidence of all around me."

Surely there can be none so blind to the future, so lost to their own good, as to prefer a life of infamy, and its ever-accompanying wretchedness, to respectability, prosperity, and true enjoyment. But how are these to be obtained? Respect-

ability, prosperity, the good opinion of community, do not come simply at our bidding. We can not reach forth our hands and take them, as we pluck the ripe fruit from the bending branch. Neither will wishing or hoping for them shower their blessings upon us. If we would obtain and *enjoy* them, we must *labor* for them—*EARN* them. They are only secured as the well-merited reward of a pure and useful life.

The first thing to be aimed at by the young should be the establishment of a **GOOD CHARACTER**. In all their plans, anticipations, and prospects for future years, this should form the grand starting-point—the chief corner-stone. It should be the foundation of every hope and thought of prosperity and happiness in days to come. It is the only basis on which such a hope can mature to full fruition.

A good character, established in the season of youth, becomes a rich and productive moral soil to its possessor. Planted therein, the Tree of Life will spring forth in a vigorous growth. Its roots will strike deep and strong in such a soil, and draw thence the utmost vigor and fruitfulness. Its trunk will grow up in majestic proportions; its wide-spreading branches will be clothed with a green, luxuriant foliage, and at length each limb and bough shall bend beneath the rich, golden fruit, ready to drop into the hand.

Beneath its grateful shade you can find rest and repose, when the heat and burden of life come upon you; and of its delicious fruit you can pluck and eat, and obtain refreshment and strength when the soul becomes wearied with labor and care, or the weight of years. Would you behold such a tree? Remember, it grows alone on the soil of a good reputation. Labor to prepare such a soil.

To a young man, a good character is the best *capital* he can possess to start with in life. It is much better, and far more to be depended on than gold. Although money may aid in establishing a young man in business, under favorable circumstances, yet without a good character, he can not succeed. His want of reputation will undermine the best advantages, and failure and ruin will, sooner or later, overtake him with unerring certainty.

When it is known that a young man is well-informed, industrious, attentive to business, economical, strictly temperate and moral, a respecter of the Sabbath, the Bible, and religion, he can not fail to obtain the good opinion and the confidence of the whole community. He will have friends on every hand, who will take pleasure in encouraging and assisting him. Blessed with health, such a youth can not fail of success and permanent happiness.

But let it be known that a young man is ignorant or indolent—that he is neglectful of business or dishonest—that he is given to intemperance, or disposed to visit places of dissipation, or to associate with vicious companions, and what are his prospects? With either one or more of these evil qualifications fixed upon him, he is hedged out of the path of prosperity.

To cover up such characteristics for a great length of time, is a moral impossibility. Remember this, I beg of you. It is beyond the power of mortals to *conceal* vicious habits and propensities for any long period. And, when once *discovered*, who will repose confidence in such a youth? Who will trust him, or encourage him, or countenance him? Who will give him employment? Who will confide any thing to his oversight? Who will render him assistance in his business affairs, when he is straitened and in need of the aid of friends?

How can the young secure a good character? Its worth, its importance, its blessings we have seen. Now, how can it be obtained? This is a question worthy the serious consideration of every youth. Let me say, in reply, that a good character can not be *inherited*. However respectable and worthy parents may be, their children can not share in that re-

spect, unless they deserve it by their own merits. If they would inherit their parents' good name, they must imitate their parents' virtues.

A good character can not be purchased with gold. The glitter of gold can not conceal an evil and crabbed disposition, a selfish soul, a corrupt heart, or vile passions and propensities. A good character can not be obtained by simply wishing for it. It is only by persevering industry and patient toil, contented to take one step at a time, that his wish is gratified, and the good character secured.

Let the young fix their eyes upon this prize of a good reputation—the only end worth striving for in life. Let them studiously avoid evil practices, corrupt associates, and vicious examples. Let them patiently and faithfully lay the foundations of virtuous habits, and practice the lessons of wisdom and the precepts of religion, and in due time the prize shall be theirs. The spotless wreath of a virtuous character shall rest upon their brow, and the commendation, the confidence, and the good-will of man shall accompany them.

[The above article is an extract from "Golden Steps for the Young to Respectability, Usefulness, and Happiness;" a series of lectures to the youth of both sexes, on character, principles, associates, amusements, religion, and marriage. Published by Derby, Miller & Co., Auburn, N. Y.]

### MAXIMS FOR YOUNG MEN.

NEVER be idle. If your hands can not be usefully employed, attend to the cultivation of your mind.

Keep good company or none.

Make few promises.

Live up to all your engagements.

Keep your own secrets, if you have any.

Good company and good conversation are the very sinews of virtue.

Never listen to loose and infidel conversation.

If any one speaks evil of you, let your life be so virtuous that none will believe him.

Ever live, misfortune excepted, within your income.

Earn your money before you spend it.



GALILEO.

**G**ALILEO GALILEI was born at Florence, in Italy, in 1564. His father, Vincent Galilei, was a Florentine nobleman, and a man of talents. He designed his son to be a physician, and for a while young Galileo applied himself diligently to the study of medicine; but he was not satisfied with the medical profession, and finally his dislike for it becoming so great, his father consented that he might give it up.

He was fond of painting and music, but mathematics afforded him the greatest pleasure. After obtaining consent to lay aside the study of medicine, he pursued his favorite science with so much ardor, that at the age of twenty-four he was appointed mathematical professor at the University of Pisa, at that time one of the most celebrated institutions of learning in Italy.

His dislike to the philosophy of Aristotle made him so many enemies that he resigned the chair at Pisa in 1592, and accepted the professorship at the University of Padua. He remained in this place eighteen years. Cosmo III. at length invited

him back to Pisa, and soon after called him to Florence, where he received the title of Principal Mathematician and Philosopher to the Grand Duke.

Galileo discovered the thermometer, an instrument by which we measure the degrees of heat and cold. In 1609, he heard of an instrument which had been constructed in Italy, that made objects seem larger and distant ones appear nearer. He immediately took two magnifying spectacle-glasses, and fitted one in each end of a leaden tube. On looking through it he discovered that objects appeared enlarged.

This instrument magnified only *three* times, yet simple as it was when compared with the telescope of the present day, he carried it to Venice, and presented it to the senate, where it excited great interest. He afterward made another instrument, which magnified eight times, and at length one magnifying thirty times.

He now applied his large telescope to the heavenly bodies, and the result was the discovery of the four moons of Jupiter, the moon-like phases of Venus, the rings

of Saturn, the inequalities of the moon's surface, and also the starry-like nature of the Milky Way. His discoveries convinced him of the truthfulness of the Copernican system.

Soon after this, he made public his belief that the sun was the center of the solar system, and that the earth moved around it and turned on its axis. On account of this belief he was persecuted by the Inquisition at Rome. The pope and officers of the Church of Rome which composed this Inquisition, believed that the doctrines of Galileo were contrary to the Bible; accordingly they decreed, in 1615, that he should renounce his sentiments, and neither teach nor publish them, or be cast into the prison. Thus compelled he renounced his belief.

For several years he remained silent on the subject, and the fears of the Inquisitors became quieted. But truth and science could not thus be long suppressed in the mind of Galileo. He longed to tell the world his views, and at length he published a dialogue, in which one person advocated the Copernican system, and another the Ptolemaic system—the one generally believed at that time. This enraged his enemies, and on the 14th of February, 1633, he was again summoned before the Inquisition at Rome, on the charge of heresy.

Previous to this Galileo had declared that, "Never will I barter the freedom of my intellect to one as liable to err as myself." But the time had now come to test his courage and resolution. For a few months he was allowed to remain in a secluded palace with a friend, but on the 21st of June, 1633, he was cited before the Inquisition.

Solemnly, and by an authority which it was fatal to resist, Galileo was called on to renounce a truth which nearly his whole life had been consecrated to reveal and maintain. This old and infirm philosopher they bade abjure and detest his own convictions and teachings, as false and heretical. His book they decreed to the flames, and condemned him for life to the dungeons of the Inquisition, bidding him recite, "once a week, the seven penitential psalms for the good of his soul!"

Did Galileo yield? Did he renounce

what he *knew* to be true? Did he abjure that theory, now universally received, affording such ample proof of the beauty and order of the universe? He was broken down by age and infirmity; his friends, more alarmed than himself, importuned him, and, kneeling on the ground, he pronounced and signed the following abjuration:

"With a sincere heart and unfeigned faith, I abjure, curse, and detest said errors and heresies, that the earth moves round the sun. I swear that I will never in future say or assert any thing, verbally or in writing, which may give rise to a similar suspicion against me. I, Galileo Galilei, have abjured the above with my own hand."

His indignation was so great, and his conviction of the truthfulness of his doctrine so strong, that, as he arose from his knees, he stamped upon the ground and whispered to a friend, "*It does move, though!*" Ay, and in spite of the Inquisition it has gone round for centuries since; nay, the whole world of thought itself has moved on and on, and by the impulses of such minds will continue to revolve for ages in a glorious cycle for mankind.

When Galileo had signed his abjuration he was sent to prison and confined for several years, after which he was permitted to retire to his home in Florence, upon the condition that he would not leave his house, nor receive visits from his friends. Though he was removed from the prison of the Inquisition they made a prison of his own home.

Notwithstanding he was thus doomed to be forever shut up from communication with great minds, and from social intercourse with his friends, yet the way from Rome to Florence seemed long, and the fleetest traveling all too slow. There was yet left to him one being from whom he could receive words of consolation—it was his affectionate child, Maria Galilei. To her his heart clung with more than fondness.

Galileo longed once more to fold her to his heart; and she, too, anticipated meeting her father with a pleasure greater than ever before enjoyed, since he had become, in her eyes, a sainted victim, by the persecution he had suffered. But alas! this

source of happiness was soon blighted. Within one short month after his return, the fond daughter died, and his home was then indeed a prison to him.

There came yet another trial: for three years before his death he was totally blind; yet he did not despair. Like Milton, he labored on for mankind, still pursuing his scientific studies. He bore all his misfortunes with patience. "Never," said Galileo, "never will I cease to use the senses which God has left me; and though this heaven, this earth, this universe be henceforth shrunk for me into the narrow space which I myself fill, so it please God it shall content me."

He died January 8, 1642, at seventy-eight years of age. Such was the malice of his enemies that his right to make a will was disputed, and he was denied a burial in consecrated grounds, also a monument, for which large sums had been subscribed. But his remains have been re-interred, and a splendid monument since erected to his memory.

"Little more than two hundred years have passed since the death of Galileo, but ample justice has been done his memory. His name will be a watchword through all time to urge men forward in the great cause of moral and intellectual progress; and the tree of knowledge, whose fruits were once on earth, plucked, perhaps, ere they were matured, has shot up with its golden branches into the skies, over which has radiated the smiles of a beneficent Providence, to cheer man onward in the career of virtue and intelligence."

[*Her'e-sy*, a fundamental error in religion. In countries where there is an established church, an opinion is deemed *heresy* when it differs from that of the church. *Pa'du-a*, a city, and distinguished seat of learning in Austrian Italy. Its University is one of the most celebrated and flourishing literary institutions of Europe. It was founded about 600 years ago, and is attended by about 1000 students. It is said to have had 6000 students 300 years ago, when it was at its greatest height of popularity. Its library contains 70,000 volumes. *Ptol-e-mæ's System*. This system of astronomy was so called from Ptolemy, its author. He lived in Egypt about 100 years after the birth of Christ. According to his system the earth was flat and inhabited only on one side,

and was the center of the universe, around which the sun, moon, planets, and stars revolved every twenty-four hours.]

## THE SNOW SONG.

BY C. MORLEY.

O GIVE me the snow, hurra! hurra!

And give me the wintery weather,  
With the whirling wreaths on the frozen ground,  
And the trackless sheet on the heather!  
Let him who may love the summer months  
With their soft and gentle showers;  
Give me, give me the piling drift,  
That over the bold cliff towers.

Old winter is here, hurra! hurra!

The icicles brightly proclaim him;  
A slippery pavement laid over the stream,  
And a thousand objects name him.  
He's made his mark on each window-pane,  
Chirography most curious,  
And for steeds he's harnessed the winds to his  
clouds,  
And drives along right furious.

Old woman! old woman! alack! alack!

Pile on, pile on, to the fire!  
The whistling winds whirl the powdery snow,  
And the heaps grow higher and higher.  
God keep thee safe from the driving storm,  
And thy heart be ever cheerful;  
His hand hath scattered the wintery snows,  
And He bids thee never be fearful.

Wrap close! wrap close! your coat and your  
cloaks,

Your buffaloes warm and your mufflers;  
The jingling bells ring a merry peal—  
And oh! how the whip-lash suffers!  
Look out, look up! what a snowy day!  
How large the flakes are falling!  
How gently they rest on the breast of the earth,  
Pure thoughts of Heaven recalling!

Look out! Take care! they'll hit you, they will!

Did you hear that snow-ball rattle?  
It came very near your warm fur cap—  
Now, boys, for a glorious battle!  
Hold on, enough! that spot on your cheek  
Tells how freely your blood is flowing,  
Oh, snow is a rich cosmetic friends,  
When the heart with youth is glowing!

Old winter is here with his snow, hurra!  
 And we love his sports most dearly;  
 We'll build with his brick our castle walls,  
 And roll his balls most cheerly.  
 And when they melt in tears away,  
 We'll not with tears regret them;  
 His hand who brings the seasons forth,  
 With these pure joys doth set them.

## STYLE.

### LONG AND SHORT SENTENCES.

**I**F an author is anxious for fullness, let him use long sentences; if for clearness, let them be short. If he is beating about for truth, his sentences will be long; if he deems he has found, and wishes to communicate it to others, they will be short. In long sentences you see processes; in short ones results. Eloquence delights in long sentences, wit in short.

Long sentences impress more at the time; short sentences, if nervous, cling more to memory. From long sentences, you must, in general, deduct a considerable quantity of verbiage; short ones have often a meager and skeleton air. The reading of long sentences is more painful at first, less so afterward. A volume composed entirely of short sentences becomes soon as wearisome as a jest-book.

The mind which employs long sentences has often a broad but dim vision; that which delights in short, sees a great number of small points clearly, but seldom a rounded whole. De Quincey is a good specimen of the first. The late Dr. Hamilton, of Leeds, was the most egregious instance of the second. With all his learning, and talent, and fancy, the writings of that distinguished divine are rendered extremely tedious by the broken and ghastly character of their style. Reading them has been compared to walking on stepping stones instead of a firm road. Every thing is so clear, sharp, and short, that you get irritated and provoked, and cry out for an intricate or lengthy sentence, both as a trial to your mind and a relief to your weariness.

The best style of writing, in point of effect, is that which combines both forms

of sentence in proper proportions. Just as a well-armed warrior of old, while he held the broadsword in his right hand, had the dagger of mercy suspended by his side, the effective writer, who can at one time wave the flaming brand of eloquence, can at another use the pointed poniard of direct statement, of close logic, or of keen and caustic wit. Thus did Burke, Hall, Horsley, and Chalmers.—*London Eclectic Review.*

## FIDELITY.

**N**EVER forsake a friend. When enemies gather around, when sickness falls on the heart, when the world is dark and cheerless, is the time to try true friendship. The heart that has been touched with true goodness, will redouble its efforts when the friend is sad and in trouble.

Adversity tries real friendship. They who turn from the scene of distress betray their hypocrisy, and prove that interest only moves them. If you have a friend who loves you, who has studied your interest and happiness, be sure to sustain him in adversity. Let him feel that his former kindness is appreciated, and that his love was not thrown away.

Real fidelity may be rare, but it exists in the heart. Who has not seen and felt its power? They only deny its worth and power who have never either loved a friend or labored to make him happy. The good and the kind, the affectionate and the virtuous, see and feel the heavenly principle. They would sacrifice wealth and happiness to promote the happiness of others, and in return they receive the reward of their love by sympathizing hearts and countless favors, when they have been brought low by distress or adversity.—*Selected.*

**A MARK OF GOOD COMPANY.**—The tone of good company is marked by the absence of personalities. Among well-informed persons there are plenty of topics to discuss, without giving pain to any one present.

## Coats of Arms, or State Seals.—No. 8.



### CONNECTICUT.

**T**HE Seal of the State of Connecticut consists of an escutcheon, of an oval form, on which are delineated three grape vines, representing the three settlements, Hartford, Windsor, and Wethersfield, which formed the early Connecticut Colony. Below the shield is the motto, QUI TRANSTULIT SUSTINET—"He who transplanted still sustains."

On the right the shield is partially supported by cannon, balls, and spears. Back of the shield, shining through the broken clouds, are seen the rays of the rising sun—emblematic of the light of knowledge dispelling the shades of superstition. Around the border of the seal are the words SIGILLUM REIPUBLICA CONNECTICUTENSIS—"The Seal of the State of Connecticut."

Connecticut is the most southern of the New England States. It is bounded on the north by Massachusetts, on the east by Rhode Island, on the south by Long Island Sound, and on the west by New York. It is about one hundred miles in length from east to west, from fifty to seventy in breadth from north to south,

and contains an area of about 4,700 square miles.

This state is divided into *eight counties*, and these counties are divided into 144 cities and townships. The population is about 330,000. The capitals of the state are Hartford and New Haven. Hartford is situated on the Connecticut River, fifty miles from its mouth, at the head of sloop navigation. New Haven is situated on a bay which sets up four miles from Long Island Sound.

The first settlement in the State of Connecticut was made in 1633, at Windsor, by emigrants from Massachusetts. Hartford was settled in 1635, by the English. Wethersfield was settled in 1636. New Haven was settled by the English, in 1638.

In 1665 a charter was granted, by Charles II., uniting these colonies under one government. In 1687, Sir Edmond Andros, then governor of New York, proceeded to Hartford with a commission from King James, appointing him governor of all New England, and demanded the surrender of the charter granted by King Charles II.



The proceedings of Andros caused a discussion, which lasted until evening. The charter was then brought in and laid on the table. While the debate was proceeding the lights were suddenly extinguished, and, notwithstanding this, order prevailed; but when the candles were re-lighted, the charter could nowhere be found.

It was taken by Captain Wadsworth, and secreted in the hollow of an oak, which stood in the lower part of the town of Hartford. This venerable tree received the appellation of the *Charter Oak*, and to this day is regarded with great curiosity. It is said to have been a forest tree before the land was cleared where Hartford is situated, yet it now appears as firm and vigorous as ever.

This charter is still preserved in the office of the secretary of the state. It continued to be the basis of the government till 1818, when the present constitution was formed. This state took a very active part in the revolutionary war, and several of her towns were burned by the enemy.

Connecticut is generally a hilly country, but the hills are not of great elevation. The state is crossed by three ranges of high land from north to south. These ranges give the general direction to the three principal streams of the state. The soil is principally of a middling quality, and better adapted to grazing than tillage. But along the valleys of the streams, especially that of the Connecticut, it is considered the best in New England.

There are several marble, and other quarries in the state; also, iron, copper, and lead mines; but the greatest treasure is the immense amount of water-power afforded by the numerous streams that rush down their declivities, and give motion to hundreds of mills, and thousands of curious machines. Around these mills little villages spring up, the inhabitants of which are engaged in manufacturing great numbers of articles for the supply of distant markets.

In some of these towns the citizens are principally engaged in making hats and caps, in others, boots and shoes, in others,

clocks, in others, wagons and carriages. Thus the state abounds in manufacturing villages, producing a great variety of articles for other portions of the country, and even for foreign trade—proofs of the industrious habits, and of the intelligence and ingenuity of the people.

The three principal rivers are the Connecticut, passing through the state from north to south, near the middle; the Housatonic, passing through the western portion, and the Thames in the eastern part. The Connecticut is navigable for vessels drawing eight feet of water to Hartford, a distance of fifty miles from the entrance to Long Island Sound. The Housatonic is navigable for small vessels to Derby, a distance of twelve miles. The Thames is navigable to Norwich, fourteen miles.

This state has about sixty miles of navigation by canal; and about 430 miles of railroad completed. Most of these lines pass through the state in northern and southern directions, but a railroad is now in progress of construction from Providence, R. I., to Hartford, and thence to Fishkill, on the Hudson River, which, when completed, will form a great thoroughfare through the state from east to west.

There are three colleges in Connecticut. Yale College, at New Haven, is one of the oldest and most flourishing institutions of the kind in the United States. It was founded in 1701, at Saybrook, and removed to New Haven in 1717. Trinity College, at Hartford, under the direction of the Episcopalians, was founded in 1826. The Wesleyan University, at Middletown, is under the direction of the Methodists, and was founded in 1831.

The Asylum for the Education of the Deaf and Dumb, at Hartford, was the first one founded in the United States. There are now similar ones in New York, Philadelphia, Ohio, and Kentucky. There is also an Insane Asylum at Hartford. These and similar institutions are fruits of education and benevolence.

There are about 130 academies and high schools in the State of Connecticut, and about 1,700 common and primary schools. There is a less number of per-

sons in this state, over the age of twenty years, who can neither read nor write, than in any other in the Union. This is doubtless owing to the liberal provisions made by the state for education. The productive school fund is larger in proportion to its population than any other state, amounting to about \$2,000,000.

The governor of Connecticut is chosen annually, by the people, and has a salary of \$1,100. The elections are held the first Monday in April, and the legislature meets the first Wednesday in May; one year at Hartford and the next at New Haven, thus alternately at the two capitals. The legislature is composed of a senate and house of representatives. The senate consists of from eighteen to twenty-four members; to the house of representatives each town sends one or two delegates, according to the population.

The State of Connecticut, though possessing a small territory, has ever exerted an important influence throughout the Union, by the intelligence, good habits, and enterprise of its inhabitants. Owing to this it has been called "the land of steady habits."

### ACTION INDISPENSABLE TO GREATNESS.

SCIENCE has been represented as dwelling upon the top of a lofty hill, the sides of which are steep, rugged, and difficult of ascent; and he who wishes to stand upon its airy pinnacle, and share its unbounded treasures, and pluck its gorgeous gems, must proceed with steady and unflinching steps; he must neither turn to the right nor to the left, nor even look back for a moment, but with a firm and unyielding purpose press onward and still onward.

How indicative of the path to greatness! There are trials and difficulties to be surmounted on every side. The path is indeed steep and rugged; and, without steady, persevering, and unyielding effort, the anxious traveler will find that he is retrograding instead of advancing.

He who would aspire to greatness, who would

"Leave the earth at will, and soar to heaven,  
And read the glorious visions of the skies;

And to the music of the rolling spheres  
Intelligently listen; and gaze far back  
Into the awful depths of Deity;"

who would pluck the golden apples from the majestic tree of knowledge; who would endear himself to the hearts of his countrymen; who would labor to reform the world, must remember that "time, faith, and energy conquereth all things."

Without effort we can possess nothing great, good, or valuable. Action is the key which unlocks the door to nature's exhaustless store-house. Action forms one important ingredient in our being. Without it life is dull, the muscle loses its power, and the system its vitality. Every thing in nature invites us to action. Action and greatness are inseparable.

The earth is a vast wilderness, wild and unproductive, affording 'neither shelter nor sustenance for man, until he puts forth his energies and subdues it. The towering trees of the forest afford him neither warmth nor shelter, without first being cut and hewn for their particular uses. The precious metals remain embosomed in the rugged mountain, valueless to man, till the indefatigable energies of the hardy miner penetrates the rock and extracts the treasure.

All nature seems to say, "Thou proud and haughty man, who fain would be lord over creation, thou shalt first conquer and subdue me before I will tamely submit to enter into thy service, and do thee homage, and add to thy riches and comfort." So in the mental world; the materials are furnished at our hands, which must be conquered and prepared as pillars to support our edifice.

Set your mind upon a high and noble object. Do nothing by the halves. Leave nothing untried. And with *action*, untiring, unyielding, and uncompromising *action* for your motto, struggle unceasingly to obtain that object. Then, as your aspirations are pure and your efforts properly directed, Heaven will smile on you, obstacle after obstacle will disappear, and ultimate success crown your labors.

P.

If a jewel be genuine, no matter who  
says it is counterfeit.

## Science,

" Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### THE PLANETARY SYSTEM.

**T**HE British Association for the Advancement of Science recently held a meeting at Edinburgh, Scotland. The president of the Association, Sir David Brewster, during his introductory address, made the following remarks:

Within the bounds of our own system, and in the vicinity of our own earth, between the orbits of Mars and Jupiter, there is a wide space, which, according to the law of the planetary distances, ought to contain a planet. Kepler predicted that a planet would be found there; and, strange to say, the astronomers of our own times discovered, at the beginning of the present century, four small planets—Ceres, Pallas, Juno, and Vesta—occupying the very place in our system where the anticipated planet ought to have been found.

Ceres, the first of these, was discovered by Piazza, at Palermo, in 1801; Pallas, the second of them, by Dr. Olbers, of Bremen, in 1802; Juno, the third, by Mr. Harding, in 1804; and Vesta, the fourth, by Dr. Olbers, in 1807.

After the discovery of the third, Dr. Olbers suggested the idea that they were the fragments of a planet that had been burst in pieces; and, considering that they must all have diverged from one point in the original orbit, and ought to return to the opposite point, he examined those parts of the heavens, and thus discovered the planet Vesta.

Though this principle was in the possession of astronomers, nearly forty years elapsed before any other planetary fragments were discovered. At last, in 1845, Mr. Hencke, of Dresden, in Prussia, discovered the fragment called Astrea, and in 1847, another called Hebe. In the same year Mr. Hind, of England, discovered the other two, Iris and Flora. In 1848, Mr. Graham, an Irishman, discovered a ninth fragment called Metis. In 1849, Mr. Gasparis, of Naples, discovered

another, which he calls Hygea, and within the last few months the same astronomer has discovered the eleventh fragment, to which he has given the name of Parthenope.

If these eleven small planets are really the remains of a large one, the size of the original planet must have been considerable. What its size was, would seem to be a problem beyond the grasp of reason. But human genius has been permitted to triumph over greater difficulties.

The planet Neptune was discovered before a ray of its light had entered the human eye; and by the law of the solar system just discovered, we can determine the original magnitude of the broken planet long after it had been shivered into fragments, and we might have determined it, even after a single fragment had proved its existence. This law we owe to Daniel Kirkwood, of Pottsville, Pennsylvania, an humble American, who, like the illustrious Kepler, struggled to find something new among the arithmetical relations of the planetary elements.

Between every two adjacent planets there is a point where their attractions are equal. If we call the distance of this point from the sun the radius of a planet's sphere of attraction, then Mr. Kirkwood's law is, that in every planet the square of the length of its year, reckoned in days, varies as the cube of the radius of its sphere of attraction.

This law has been verified by more than one American astronomer, and there can be no doubt, as one of them expresses it, that it is at least a physical fact in the mechanism of our system. This law requires the existence of a planet between Mars and Jupiter; and it follows from the law that the broken planet must have been a little larger than Mars, or about 5,000 miles in diameter, and that the length of its day must have been about 57½ hours.

The American astronomers regard this law as amounting to a demonstration of the nebula hypothesis of Laplace; but we venture to say that this opinion will not be adopted by the astronomers of England.

Among the more recent discoveries within the bounds of our own system, I can not omit to mention those of Mr. Lassell, of Liverpool. By means of a fine, twenty-foot reflector, constructed by himself, he detected the satellite of Neptune, and more recently an eighth satellite, circulating around Saturn—a discovery which was made on the very same day by Mr. Bond, director of the Observatory at Cambridge, in the United States.

### SUPERIORITY OF NATURE OVER ART.

**A**N interesting anecdote is told of Cecco and Dante, the latter an Italian poet, illustrating nature's superiority. Cecco maintained that nature was more potent than art; but Dante asserted to the contrary. In proof of this principle, the great Italian bard referred to his cat, which, by repeated practice, he had taught to hold a candle in its paw while he read or took his supper.

One day Cecco paid Dante a visit. He went prepared to test the poet's philosophy, and requested Dante to show him an experiment with his cat. The animal performed her part with perfect satisfaction till Cecco lifted the cover from a dish of mice, which he took with him. No sooner did the mice make their appearance than the creature of art showed the weakness of a talent acquired, and, dropping the candle, sprang on them with all its instinctive propensity.

On beholding this, Dante confessed that the native faculties had the superiority, and that the position of Cecco was right.

The microscope reveals to our view many striking illustrations of the "superiority of nature over art." This is clearly shown by the following examples:

On examining the edge of the sharpest razor or lancet with a microscope, it will appear as broad as the back of a knife, rough, uneven, and full of notches and furrows.

An exceedingly fine needle, when seen

through a microscope, resembles an iron bar. The sting of a bee, seen through the same instrument, exhibits everywhere the most beautiful polish, without the least flaw, blemish, or inequality, and it ends in a point too fine to be discerned.

The threads of fine lawn, when thus beheld, seem much coarser than the yarn with which ropes are made for anchors; but a silkworm's web appears perfectly smooth and shining, and everywhere equal.

The smallest dot that is made with a pen thus appears irregular and uneven; but the little specks on the wings and bodies of insects are found to be the most accurate circles. How magnificent is the system of nature!

### THE EXTENT OF OUR COUNTRY.

**I**T has been computed that the United States have a frontier line of 10,750 miles; a sea-coast of 5,430 miles; a lake-coast of 1,160 miles. One of its rivers is twice as long as the Danube, the largest river in Europe. The Ohio is 500 miles longer than the Rhine, and the noble Hudson has a navigation in the "Empire State" 120 miles longer than the Thames.

Within Louisiana are bayous and creeks almost unknown, that would shame, by comparison, the Tiber or Seine. The State of Virginia, alone, is one third larger than England. The state of Ohio contains 3,000 more square miles than Scotland.

The harbor of New York receives the vessels that navigate the rivers, canals, and lakes, to the extent of 3,000 miles, equal to the distance from America to Europe. From the capital of Maine to the "Crescent City," is 200 miles farther than from London to Constantinople; a route that would cross England, Belgium, a part of Prussia, Austria, and Turkey.—*Selected.*

**A NEW WATCH.**—At Geneva, Switzerland, a watch has been invented, which supersedes the use of a key. The watch is wound up by simply touching a screw in the handle. The hands are also regulated in the same manner.

## General Intelligence.

### JENNY LIND'S VISIT TO THE BLIND.

ON Tuesday, the 12th of November, Jenny Lind paid a visit to the Institution for the Blind, in New York. It was unexpected to the superintendent, as well as to the inmates, and the pupils, about one hundred and thirty in all, were assembled in the chapel without knowing for what purpose, and least of all who was the cause of their being called together.

When it was announced that Jenny Lind was their visitor, and that she would sing a few songs for them, they manifested great surprise and delight. When she had finished singing their enthusiasm seemed as if they had just awakened to the pleasures of a new sense.

The pupils thronged Miss Lind wherever she moved, and seemed perfectly happy when she took them by the hand and addressed them. One little girl urged her way modestly through the crowd of her companions, and said, jokingly, "I want to see Jenny Lind." Jenny took hold of her delicate hand, and said, "Poor thing, I wish you could see the sky!" "Oh," said the little girl, promptly, "I shall see that in heaven, and I shall see you there, too." "But," said Miss Lind, "you may have a much higher place there than I." The little girl replied to the import that "None but angels will occupy higher seats in heaven than Miss Lind." The humility and childlike simplicity of this scene was truly affecting.

To another pupil who approached her she said, placing her hands upon her shoulders, "Are you entirely blind?" "Yes," was the reply. "Can not you see at all? Can not you see me?" "No," said the little girl; "but hearing is the greater blessing now." Such was Jenny's familiarity and kindness as she mingled with the children, that all seemed anxious to touch her. At times she would seat herself on a bench or stool, while passing through the rooms and workshops, and call the little children around her, that they might be indulged with feeling of her hands and face.

Such a gratification as that afforded by Jenny Lind's visit those unfortunates, whose eyes

"Bereft of light, their seeing had forgot,"

never enjoyed before. Though she has appeared before the learned and the wise, before the nobility of Europe and the people of America, and received the rapturous applause of thousands,

yet we doubt whether Jenny Lind ever appeared to a better advantage than amid this throng of blind children, upon whom she dispensed with grace her tenderness and sympathy.

**ANOTHER SATELLITE OF NEPTUNE.**—It is said that Mr. Lassell, of Liverpool, has discovered a second satellite of the planet Neptune. The discovery was made by a telescope of twenty feet focal length, which was manufactured by himself, and is said to be the most powerful instrument in Great Britain.

**NEWSPAPER IN CHINA.**—A newspaper is now printed in China, called the Pekin Monitor. It is in the Chinese language, and is the first paper ever published in the Celestial Empire.

**AMIN BEY'S VISIT TO THE UNITED STATES.**—Amin Bey is a Turkish envoy from the Ottoman Porte, or government of the Turkish Empire, to the United States, for the purpose of examining into our public and private works, and other evidences of our nation's prosperity. This mission is one of the most wonderful evidences of the spirit of progress of this age. Our government has appropriated a munificent sum to pay the expenses of the investigation, and orders have been issued to every public station that the envoy be received with national honors, and to have every facility granted him. He is now on a tour through our country.

He recently visited Boston, and on going into the public schools there he was much surprised to find that the girls knew any thing. In Turkey the women are left in ignorance and kept in seclusion.

**THE FREE SCHOOL LAW IN THE STATE OF NEW YORK.**—This question is now decided by a majority of over 25,000 against the repeal of the Free School Law. We hope that the next legislature will at once place it in such a shape that good will result from it, and that we may have flourishing FREE SCHOOLS throughout the Empire State. We believe that the opposition to it, in nine cases out of ten, has been to the form of the law rather than to the principles on which it was intended to be founded.

**SPELLING BACKWARD.**—An exchange paper tells of a boy, fourteen years of age, who can spell backward with as much facility as he can spell forward. That may not be so strange, after all; perhaps he can not spell either backward or forward.

## YOUTH'S DEPARTMENT.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### CHOICE OF COMPANIONS.

BY MISS ELIZA A. CHASE.

**I**N a pleasant village in the western part of New York resided a family of orphan children, consisting of three sisters and two brothers. Their parents died when the eldest daughter was about eighteen years of age, and the youngest five.

Louisa Rossiter possessed great energy and determination, and, after recovering from the shock occasioned by her bereavement, she resolved on keeping the family together and assuming the responsibility of their management.

Happily, the father had left a competence for his children, and it needed only common prudence and economy for them to succeed in pecuniary matters, at least. Early imbued with the loftiest moral principles, and possessing a good practical education, Louisa found her task, though a very important one, by no means unpleasant. Almost idolized by her young sisters, they obeyed her commands with willingness, so that hers was generally a labor of love.

Taking the example of her parents for her guide, Louisa endeavored to mold the minds of her young charge to the patterns of virtue. Henry, her youngest brother, was a warm-hearted, impulsive youth, and no one looked on his open brow, or into his clear, bright eye, without feeling that there beamed a kind and loving spirit, there dwelt a frank and noble soul.

William, the eldest, was of a more retiring nature, but of an upright and firm purpose, and shared with Louisa

the love and reverence of the others. Both the brothers were pursuing their studies in the excellent academy of which the village was so proud. Ellen attended a private school, and little Clara, the youngest and the pet, received instruction from her sister at home.

Near them lived a cousin of their father's, whose family, priding themselves on their *aristocracy*, were engaged in all the fashionable amusements of the day, and who, therefore, could hardly understand the practical, common-sense principles of the Rossiters.

It was exceedingly mortifying to Mrs. Cline and her daughters to see the independent, straightforward, and sometimes unfashionable course taken by Louisa and her brothers, and many were the unsuccessful attempts to reduce them to a compliance with their wishes.

"Louisa," said Mrs. Cline one evening, as she seated herself with a patronizing air in the little parlor of the former, "Louisa, my dear, I have something to say to you."

"Very well, cousin Sarah, I am ready to hear it," returned Louisa, with a smile.

"I hope you will take it in kindness, for you know what a regard I have for you," said Mrs. Cline, "but I deem it my duty to inform you that William and Henry have some very unprofitable associates, or rather friends."

"Indeed," said Louisa, anxiously, "and who are they, pray?"

"A very low fellow, whom Henry,

especially, patronizes on all occasions, and he has even been seen walking arm in arm with him in the street. I hear there is quite a talk about it, and Charles told me to-day that James Stevens, the young lawyer, had said to him, 'Cline, that young cousin of yours, Henry Rossiter, has high notions of gentility, judging from his associates.'"

"I shall certainly remonstrate with Henry," said Louisa; "but you have not yet told me who it is."

"Why, George Cameron, Dr. Hilliard's servant," said Mrs. Cline, pompously.

Louisa drew a long breath, and then, with a laugh, observed, "Forgive me, cousin Sarah, but I am much relieved by finding that my brother's friend is George Cameron. Surely his character is irreproachable, and I think him a talented and amiable young man."

"I am shocked and grieved, Louisa, that you have imbibed such plebeian notions," returned Mrs. Cline, drawing herself up. "Your brother associating with a common servant, and you approving it!" and the lady tossed her head indignantly.

"As I understand the matter," said Louisa, mildly but firmly, "the only objection to George Cameron is, that he is poor, and obliged to work for the means to defray the expenses of his education. He possesses talent, and the highest moral character, and though nurtured in poverty and obscurity, he is determined to be something in the world. He has no money, but he has what is better, a will, influenced by the purest and loftiest motives.

"To secure his position in school he works night and morning for Dr. Hilliard, and thus pays his board. For this he is called a servant, but I see nothing humiliating in it. He possesses the esteem and confidence of his teachers, and I think he deserves it. I, too, am acquainted with him, for he

has spent several evenings here with William and Henry, and I am glad they have such a friend."

"I can not understand such low notions," said Mrs. Cline, rather tartly. "*My son* shall not associate with such persons, and I think Judge Simpson, and all the aristocracy, will say the same."

"Perhaps they will," returned Louisa; "but remember that Martin Luther supported himself when at college by singing and by sawing wood for the students. Look at Franklin. We are justly proud of him, and admire him for his economy, ay, for his very poverty. Why, then, should we despise George Cameron for following his example."

"Louisa, good night," said the lady, as with an air of offended dignity she left the room. Louisa had defended her brother's friend with so much tact that the weak-minded Mrs. Cline could not refute her arguments.

George Cameron's parents were very poor. His father, by endorsing for a friend, had lost all his property, and after this event he sunk into an apathy from which it was impossible to arouse him. It seemed as if all motives to exertion were lost, and he toiled as one without hope.

George felt that burning desire for knowledge which no adverse circumstances could overcome, and though his sensitive spirit was often wounded at school by the cold neglect of some, and the coarse remarks of others, he found an unfailing source of pleasure in the friendship of William and Henry Rossiter.

Charles Cline, following the example of his prudent mother, took it upon himself to remonstrate with Henry for his non-aristocratic notions, telling him that unless he desisted he should be obliged to cut his acquaintance. But he received such an indignant and eloquent reply from the generous

young man that he was glad to escape from further conversation on the subject.

After bearing off the highest honors of the academy, George Cameron left for the West, resolving, as he told his friends, to work or teach till he should acquire a sufficient sum to take him through college.

Charles Cline, and William and Henry Rossiter, graduated in a year or so; the former with a superficial knowledge of whatever he undertook, the latter with the well-deserved reputation of thorough and practical scholars. Charles entered one of the village stores as a clerk, William prosecuted his studies as a lawyer, Henry as a physician.

Some four years subsequent to the conversation we have just related, Louisa Rossiter received from her brother Henry, who had gone to Ohio to establish himself in business, a letter which contained the following intelligence.

"Being in the vicinity of C— college, and hearing much about the exercises of the following day, I resolved to attend. Several addresses were delivered by fine-looking, elegantly-dressed young men, but these were of the usual class. At length a young man very plainly dressed made his appearance on the stage. His hair was thrown back from his intellectual forehead, he was very pale, and his thin lips quivered as he looked on the vast audience, but his eye beamed with the light of true genius.

"Judge of my surprise when I recognized in the pale student before me, our old friend, George Cameron. His theme was: 'The Intellectual Powers;' the opening was beautiful, though his evident embarrassment made me fear for him; but as he warmed with his subject he seemed to forget himself, and gem after gem of the most sparkling thoughts and brilliant

expressions flashed on his delighted audience.

"He spoke of the divine nature of the mind, its aspirations for the holy and beautiful; its deep sympathies; its godlike capacities, and in a burst of enthusiasm he raised his hands to heaven and exclaimed, 'I thank thee, O my God, that thou hast given me an intellectual being.' The effect of his masterly production was wonderful and the applause was deafening, yet how modestly did he bear his triumph.

"You may imagine our meeting after the close of the exercises. We spent the evening together, talking over old times and forming plans for the future. Do you remember how our goodly cousins, Mrs. Cline and her son, used to reason with me on the impropriety of associating with such a person?"

George Cameron has since received the appointment of Professor of Belles Lettres in one of the colleges of this state, a noble example of what a young man can accomplish when he directs his efforts to a true and lofty aim.

## THE LITTLE MATCH BOY.

BY MRS. LYDIA BAXTER.

It was December, cold and drear,  
And stormy was the weather,  
When all around, both far and near,  
The snow-flakes clung together.

With garments thin, and bare red feet,  
A boy, both sad and weary,  
Passed on through many a winding street,  
'Till darkness veiled him, nearly.

"Matches, matches!" he loud did cry,  
Nor yet had sold he any,  
For none appeared that day to buy,  
Or give him one red penny.

To none he told his bitter woe,  
For he had now no mother;  
She slept beneath the pure white snow,  
Beside his little brother.



His sister all alone did stay,  
Or watch her drunken father,  
While thus their bread from day to day,  
Did he with matches gather.

Benumbed and sad he sat him down,  
Drawing his cold feet under;  
He feared his father's angry frown,  
But more his sister's hunger.

He said, "A dreary world is this,  
I'm glad there is another;"  
And then he thought he felt a kiss,  
From his dear angel mother.

And bending o'er him stood a form,  
With kind and manly feeling,  
Whose heart with sympathy was warm,  
For tear-drops down were stealing.

He knew that boy, so marble cold,  
And bade him not to sorrow,  
Placed in his hand some shining gold,  
And told him, "On the morrow,

"Sister of plenty shall partake;  
And you, her noble brother,  
Shall have a home for her own sake—  
Your dear departed mother."

### TO GIRLS.

**T**HERE is some excellent advice which we wish all the girls to read and remember. There is nothing lovely about a girl who is unkind to her mother, and we sincerely hope, if you have a mother to love, that you will always treat her with kindness.

Have you a father? Have you a mother? Do you love them? Girls, do you know the value of your mother? Nobody loves you, nobody will love you, as she does. Do not be ungrateful for that love; do not repay it with coldness. Unloved and unloving you will live and die, if you do not love and honor your father and mother.

Never call either "old man," or

"old woman." It is too often a habit in this country for young people to name their parents thus. This is rude, impudent, and undutiful. Any aged person is an old man or an old woman.

There should be something sacred, something peculiar, in the word that designates parents. The tone of voice in which they are addressed should be affectionate and respectful. A short, surly answer from a child to a parent falls very harshly on the ear of any person who has a true idea of filial duty.

Be sure, girls, that you each win for yourselves the name of a dutiful daughter. It is so easy to win that no one should be without it. It is much easier to be a good daughter than a good wife, and mother. A child's duties are much more easily performed than a parent's; so that she who is a good daughter may fail to be a good wife or mother; but she who fails in this first, most simple relation need never hope to fill another so well. Be sure, then, that you are a good daughter. It is the best preparation for every station, and will be its own reward.

The secret you dare not tell your mother is a dangerous secret, and one that will be likely to bring you sorrow. The hours you spend with her will not cause you regret; and you should never feel disappointed, or out of humor, for not being permitted to go to some place to which you wish to go. You should love her so well that it would not be felt a punishment to give up the gayest party to remain with her.

Nothing is more beautiful than to see a girl take off her things and sit smilingly down with her mother, because she wished it. Go and kiss your mother, as you used to do when a child, and never grow too large or wise to be a child at her side.

## Natural History.



### THE GNU.

BY HENRY WILSON.

To the casual observer the Gnu appears to be compounded of several animals. His body resembles that of a horse; his limbs and feet are like those of a stag; his head and horns are similar to those of the Cape buffalo. However, zoologists class him with the *Antelope*.

The Gnu is about the size of a mule or a small horse. It is covered with long hair, of a brown color. The mane stands erect, and the hair of the tail is long, like that of a horse. The horns are flattened at the base, and bend downward and forward over the forehead, and, turning up, become round and form a pointed hook.

In the above cut the Gnu is represented as having caught, in the hook of one of his horns, a small tree, which seems to be holding him against his desire. The head of another may be

seen above the tall grass on the left, looking at his fellow struggling for freedom.

The nostrils of the Gnu are large, and covered by a fold of skin, which, being under the control of the animal, answers all the purposes of a valve, to defend the olfactory organs against those particles of dust, which the slightest breeze wafts in clouds from the shifting surface of the desert.

This animal is found roaming in small herds over the vast plains of Southern Africa. There he spends his time in grazing the long grass and the luxuriant vegetation of those regions. It is a fleet animal, and bounds away over the plain with great speed.

When seen running in the distance the traveler might easily mistake them for the wild zebras which inhabit the same localities, were it not for their

dark and uniform color, and from the fact that they always run in lines, one behind the other.

Sometimes travelers, on meeting a herd of them, hoist a red handkerchief, which excites these creatures in such a manner that they come prancing about, and then fly away at a rapid bound.

### MY MOTHER'S GENTLE WORD.

**M**y precious mother died when I was six years of age, and though long and weary years have gone by, and I have seen changes sad and many, yet a little incident of my childhood, some two years previous to her death, will never be erased from my memory.

I had one Sabbath morning been taken to church by an elderly lady who resided with us—my mother being too ill to go out. I remember that it was the season of Christmas, and the little Church of D— was gayly decorated with wreaths of evergreen. To my childish eye it was beautiful.

I began playing with the spruce and myrtle which hung near the pew, and despite the angry looks and whispered reprimand of my friend, I kept on plucking the leaves and throwing them all about, until at last, mad-cap as I was, I put some of the dried pieces in the foot-stove to make a smoke!

Service being ended, my attendant pulled me along through the aisle, and observed, when we reached the door, "Now, you wicked child, I shall take you to your mamma, and she must whip you." I made no reply, for conscience told me I deserved it well.

We reached home, and I was taken to my mother's chamber, and the whole scene is as vividly before my mind as though it passed but yesterday. My mother was seated in her easy chair, supported by pillows,

"white fatal beauty mantled her cheek!" The sweet smile, with which she greeted my entrance, faded from her lips as she heard the recital of my misdeeds.

After a moment's pause she begged to be left alone with me, when drawing me to her bosom, she laid her soft hand upon my head, and the tones of her loving voice, oh! how they did sink into my soul, as she said, "You have grieved your poor sick mamma."

I felt her tears upon my cheek; there was no need to say more. I clung to her arms, and sobbed as though my heart would break. Her gentle word had done what punishment, in my case, could not have effected.

This little incident, so trifling in itself, has indelibly impressed my mind. To this day I feel the hallowed influence of those loving tones. I have been a wanderer "o'er the world's wide waste," yet my early home, and the lessons learned there still linger at my heart, perhaps influence my daily life.

*Selected.*

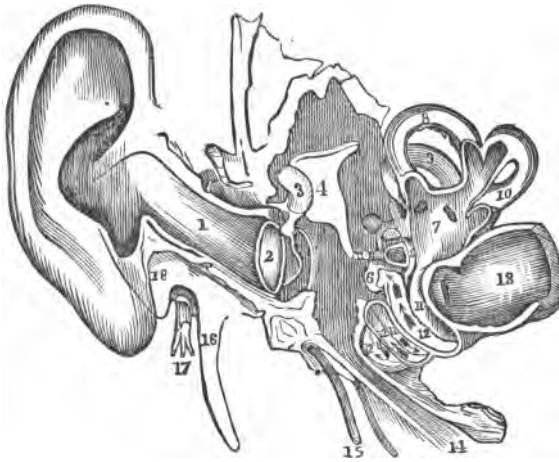
### WORK IF YOU WOULD RISE.

RICHARD Burke being found in a reverie shortly after an extraordinary display of powers in the House of Commons by his brother Edmund, and questioned by Mr. Malone as to the cause, replied, "I have been wondering how Ned has contrived to monopolize all the talents of the family, but then again, I remember, *when we were at play he was always at work.*"

The force of this anecdote is increased by the fact that Richard Burke was considered not inferior in natural talents to his brother. Yet the one rose to greatness, while the other died comparatively obscure. Don't trust to your genius, young man, if you would rise, but work! work! work!

*Selected.*

## PHYSIOLOGY—NO. II.



A VIEW OF THE PARTS OF THE HUMAN EAR.

## THE EAR.

BY T. ANTISELL, M.D.

**T**HROUGH the senses we hold intercourse with the outer world; and few of these gifts of the Creator bestow more solid pleasure than that of *hearing*, whether it be exercised in the delightful converse of intellect, or in the all-absorbing rhapsody of divine melody. Without it language has but half its use, and the man devoid of hearing is in some degree severed from the social circle. Upon such fall without appreciation the eloquence of a Henry and the warbling of a Lind.

Man, as an animal, enjoys this faculty in a high degree, and although not to the extent which some other animals exhibit, yet the apparatus is so delicate and well appointed for his position in the scale of animated being as to render it interesting to point out the peculiarities of this sense.

We are not to imagine because some animals have not an outer ear

that therefore they do not hear. The essential organ of hearing is a nerve specially endowed with the property of receiving and transmitting the vibrations of sound. If this be present, even though it be encased in the bony skull, hearing will exist, as the nerve will still be affected by vibrations however slight.

It is only among the highest endowed animals that a special Ear is found. The soft pulp of an auditory nerve, floated in a gelatinous fluid, and contained in a thin and elastic membranous cavity, is found from man down to the cuttle fish. Below this last no traces of any organ of hearing are discovered. This gelatinous pulp in the crab and lobster is contained in a hard and horny covering, being nothing more than a cavity in the skull, lined with the nerve and filled with fluid.

In the least organized fishes a little

\* 1. The external canal. 2. Tympanum membrane. 3. Hammer bone. 4. Anvil bone. 5. Stirrup bone, at the opening into the vestibule (7). The orbicular bone is between 4 and 5. 6. Round opening leading to the cochlea. 7. Vestibule. 8, 9, 10. Semi-circular canals opening into the vestibule. 11, 12. Cochlea. 11, 11, 11. The canal of the cochlea that opens into the vestibule of the internal ear. 12, 12, 12. The canal of the cochlea that connects with the middle ear, through (6). 13. The internal canal. 14. Eustachian tube. 15. Auditory nerve. 16. Styloid process of the temporal bone. 17. The 7th pair of nerves going to the internal ear. 18. Mastoid process.

passage is added, which leads outward, and in which the nerve is spread. It resembles one of the semicircular canals in man. In the lamprey two such canals are found; and in fish of higher development, three such canals exist, the same as in man.

In the true reptiles there is an advance; there is a *drum* and a cavity, with a chain of bones, and a rudiment of the cochlea. In birds the structure is the same as in the higher reptiles. A distinct cochlea exists in them, which is not spiral, but straight; and the tympanum communicates with cavities in the skull bones, filled with air. There is no external ear, however, except in a few nocturnal birds, as the owl.

In the mammals the organ of hearing resembles that of man, the cochlea is a spiral, and they all, except the aquatic tribes, as the whale and the seal, have an external ear. Sometimes the Ear is of an enormous size compared with the body, as in the bat.

The organ of hearing in man consists of three very distinct parts. One part is placed externally and intended to collect and transmit the sonorous rays. This external ear may be removed from man, and some animals, with impunity; for though it be cut off, after a few days hearing returns with its wonted delicacy. The rays of sound are modified in passing along the intermediate canal, between the external and internal ear (1).

The external ear and the canal may be compared to a trumpet, so well adapted is it for concentrating sound. In its natural position the Ear is turned slightly forward, an arrangement favorable for collecting sound, as is evident with savages, whose acuteness of sense is remarkable.

The cartilage of the Ear is elastic and covered with thin skin. It is always devoid of fat, which would destroy its sensibility, and is furnished

with delicate muscles, which relax or contract the cartilage as the sounds are acute or grave. The muscles are attached to the prominences of the ear and are most developed in timid animals with long ears. The hare, for instance, whose only safety is in flight, has the power of making the ear assume various forms, shaping them into more advantageous trumpets, to catch the slightest sound.

At the bottom of the canal is stretched a thin and transparent membrane, the *tympanum*, or drum (2), which closes up the passage, and receives the tremulous motions of air, and thus communicates external impulses to the cavity in which the small bones of the Ear are situated. The membrane of the drum is naturally lax, which is the best condition for propagating ordinary sounds, especially grave ones. When acute sounds have to be heard distinctly, the membrane must be tightened up by muscles. Some persons have this membrane unusually tight, and hence hear delicately acute sounds, while they are deaf to graver notes.

The small bones of the Ear are situated in the cavity within this membrane. On the opposite side of the cavity is an oval opening leading to the vestibule, and a round opening (6) leading to the cochlea. In front, the Eustachian tube (14) passes out into the back part of the nose, and thus forms a communication between the external air and the internal ear.

The small bone, the hammer (3), is attached to the membrane of the drum, and rests on the anvil bone (4), one leg of which is connected to the third, the orbicular bone, which joins the stirrup bone (5). This last rests on the membrane covering the oval opening. These bones are thus a connected spring, or chain, which conveys the impressions of sound from the tympanum to the internal ear.

The internal ear consists of the vestibule (7), the cochlea or spiral bone (11, 12), the semicircular canals (8, 9, 10), and internal passage. The vestibule and semicircular canals are filled with a thin fluid, and lined with a fine membrane, upon which is spread out the minute expansions of a branch of the seventh pair of nerves (17), which runs along the internal passage to the inner ear, and lines these cavities.

It is by means of the expansion of this nerve that hearing is obtained, and all the arrangement of parts described is to convey this external impulse to it. It is curious that the extremities of the nerve are bathed in liquid, for which no satisfactory reason has been assigned. The uses of all the parts of the internal ear are not yet fully understood.

Sufficient has here been given to show the uses of the parts described. The inner ear is the most important part. Injury to this is ruinous to hearing. The drum may be broken and hearing may remain, but disease or injury to the small bones ends in deafness.

Every one has seen a child, or a very attentive listener, gaping with open mouth at a pleasing narrative. This is an instinctive movement to catch every sound; for by lowering the jaw the external canal becomes wider, and more rays of sound enter. This may be proved by putting the finger in the Ear, and then opening the mouth, when the passage will be felt to enlarge.

Excessive vibrations of sound, as reports of cannon, often produce deafness by breaking the tympanum membrane, and displacing the small bones. The vibrations being too powerful against the membrane it becomes torn across. Children's ears are often injured, similarly, by thrusting sticks or small articles into them.

[*Audit-o-ry*, that which has the power of hearing. *Ge-lat'i-nous*, resembling jelly or dissolved glue. *Mem'brane*, a thin, white skin. *Cuttle Fish*, is a much lower order than the common fish. It has several arms projecting forward from its head. In the center of these arms is its mouth. The arms are used as oars, and the fish swims backward instead of forward. When pursued they throw out a black liquor which darkens the water and thus enables them to escape. *Lamprey*, a fish resembling an eel. *Nocturnal birds* are those that fly at night. *Mam'mals*, animals that suckle their young. *A-quatic tribes*, animals that live in the water, as fishes. *So-no'rous*, giving sounds. *Im-pu'ni-ty*, freedom from injury. *Car-tilage*, a smooth, solid, elastic substance, softer than bone; gristle. *A-cute*, sharp, or high. *Grave*, low, solemn.

### ADVICE FOR BOYS.

**B**OYS, read something useful every day; something to reflect upon and talk about while at your work, or on the road to school. Be inquisitive; find out things. Don't let the blood pass from your heart to your fingers' ends thousands of times and you know nothing of its motions. Store your minds early with wisdom. Crowd in a little daily.

Remember Roger Sherman. He was one of the noblest examples of how much self-cultivation may do to make a great man. His school privileges were of the most ordinary kind.

Early in life he was apprenticed to a shoemaker, and instead of joining in the vulgar conversation so common to many of his companions, he would sit at his work with an open book before him, and devote every moment to study that his eyes could be spared from the occupation in which he was engaged.

Be saving of your little allowances, and buy books. Lives of good and great men—men such as Washington and Howard, and a host of others, whose virtues have rendered their names immortal. Cultivate a taste for reading. The field of interest and instruction to which it will lead you is boundless.—*Selected.*

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### CHARLES CLEAR.

**T**HERE is a good story, which Cousin Ann tells, of a little boy who would not do wrong.

Charles Clear was a handsome little boy, with curly hair and dark hazel eyes. But he had something far better than fine looks.

"And what could that be?" said little Margaret.

I will tell you: he had a good heart; and so his papa said he was worth more than ten times his weight in gold.

When he wanted anything done, he did not say, "Tom, bring me my hat;" "Lucy, I want a drink; give it to me;" but he waited upon himself when he could do it; and when he could not, he would say, "Will you please to do this for me?"

He said he thought it was a shame to live an idle life; and when he was asked to do anything, he never said, "I won't," or "Let James do it," as idle Tim-o-thy Toots would do, but he did it himself as soon as he could.

One day his mother sent him to carry a basket of nice cakes to a poor woman who lived a mile off.

Tim-o-thy Toots went with him; and when they got out of sight, Tim-o-thy said to Charles, "Let us eat some of these nice cakes; there will be enough left for that old woman, and your mamma will never know it."

But Charles said, "No, indeed! it would be just as bad as if she did know it. Besides, she has trusted me to carry these cakes, and I would not deceive my mother for all the cakes in the country."

So Tim-o-thy felt ashamed, and the poor woman blessed Charles many times, and said, "Your mother is very kind."

Tim-o-thy thought no one would find him out at his sly tricks, but he often got caught, and, at last, nobody could trust him.

People would say when they saw him pass by, "There goes a naughty boy that no one can believe."

Besides, his own thoughts

found him out, and shamed him.

Tim-o-thy felt bad-ly ; for people who do wrong are al-ways un-hap-py.

I think one rea-son that Charles Clear act-ed so well, was be-cause he tried to have good thoughts. His moth-er told him that he must not keep any thoughts in his mind that he would be a-shamed for her to know.

If any ug-ly thoughts came, she said he must drive them a-way, as if they were thieves.

So he thought a-bout his books, and his work, and his pleas-ant plays ; and when any bad thoughts peep-ed in, there was no room for them, and they soon went a-way.

Now won't you do like lit-tle Charles Clear ? Will you not think a-bout your books and a-bout what you read, and not let bad thoughts stay in your mind ?

#### AUNT ELIZA'S STORIES,—No. VIII.

##### THE IRISH.

**T**HERON WEED came home from school one night looking very sad and thoughtful. After he had eaten his supper he turned to his mother and said, "Mother, did you ever know of any one starving to death ?"

"No, my son," said his mother ; "but I have heard of such things. Why do you ask me this ?"

"Because," said Theron, "our teacher told us a story to-day of some children who were lost in the woods, and were starved to death, and it seems so dreadful."

"It is very dreadful, my dear," replied his mother ; "but I will tell you of a nation starving, which is still more dreadful."

"Oh, mother, that is too horrid. What nation is it ?"

"The poor Irish. Ireland is a beautiful country, and yet the people suffer dreadfully. The poor live in miserable huts, and their food consists chiefly of potatoes. A few years ago the potatoes were cut off by a kind of disease, and a famine ensued."

"What is a famine, mother ?"

"It is a great scarcity of food throughout the country, my child. Do you not remember reading about the famine, when the sons of Jacob went to Egypt to buy corn of their brother Joseph ?"

"Oh, yes, mother ; and when they were all there, he told them he was their brother, and sent for his father to come and live with him, for the famine was in that land."

"The poor Irish, having lost their potatoes, had nothing to



live on, and they starved by hundreds. In some houses the dead bodies lay for days, for there were none to bury them.

"Little children asked food of their dead parents, and pale, famished men crawled out to the roadside to work, and obtain a little something to keep life in them a few days longer.

"I remember reading a sorrowful account of a little boy who was dying of hunger, and he begged his mother for something to eat.

"'Give me three grains of corn, mother,' he said, 'only three grains of corn,' but the poor mother had not even that to give, and her darling boy died begging for three grains of corn.

"At length news came to America of the dreadful state of the people, and our kind-hearted countrymen loaded a ship with food, and sent it to the unhappy Irish.



"There it was taken to a large house and cooked, and the poor creatures came and were fed from the gift of America."

"Oh, mother, how kind that

was, and how happy must those people be who gave that food," said Theron.

"Yes, my son, the Bible truly says, 'It is more blessed to give than to receive.'

"Many of the Irish left their beautiful but wretched island, and came to America; and I have often heard them, with tears in their eyes, call on Heaven to bless the Americans for their kindness to suffering Ireland.

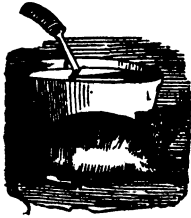
"I have heard them tell of those woful scenes of the dead and dying, with their hollow cheeks and glaring eyes, and skin shrunk and wrinkled, and I thanked God that we live in a land of plenty."

"Oh, mother," said Theron, "I shall always feel kindly toward the Irish, when I see them hard at work on our railroads and canals, and I shall think of that dying boy asking for three grains of corn.

"How often I waste my food, and I have such a plenty, while that little boy, who was as good as I am, starved to death."

"Learn from this, my son, to be thankful for the favors you receive from your Creator, and be kind to the poor and needy, and assist them as much as you can; for remember we are all children of the same heavenly

Parent, and are alike the objects  
of His love and care."



THE MOUSE AND THE BOWL OF MILK.

**H**ENRY! Henry! come here;  
come quick, before it is  
gone!

"Before what is gone, Fanny?"

"A little mouse that has climbed up on the table, and is trying to find something to eat.

"See! he is by my bowl of milk! He has been running around the bowl, but could not find anything; now he is smelling to find where the milk is."

"Shall I call puss, Fanny?"

"No, no! Do not let her get it; she will kill the poor thing."

"Then shall I drive it away? it may get your milk."

"No, Henry, do not scare it yet; I want to look at it longer. Oh, see how shy it is!"

"Well, it is in mischief, Fanny. Bad children, you know, are shy, too, when they are doing mischief, for they fear some one will see them."

"Oh, Henry, here comes puss!"

There, she sees the mouse! Poor thing, he is caught at last."

### I MUST NOT TEASE MY MOTHER.

BY MRS. L. H. SIGOURNEY.

I MUST not tease my mother,  
For she is very kind,  
And every thing she says to me  
I must directly mind;  
For when I was a baby,  
And could not speak or walk,  
She let me in her bosom sleep,  
'And taught me how to talk.

I must not tease my mother,  
And when she likes to read,  
Or has the headache, I will step  
Most silently indeed.  
I will not choose a noisy play,  
Nor trifling troubles tell,  
But sit down quiet by her side,  
And try to make her well.

I must not tease my mother,  
I've heard dear father say.  
When I was in my cradle sick,  
She nursed me night and day.  
She lays me in my little bed,  
She gives me clothes and food,  
And I have nothing else to pay  
But trying to be good.

I must not tease my mother,  
She loves me all the day,  
And she has patience with my faults,  
And teaches me to pray;  
How much I'll strive to please her,  
She every hour shall see,  
For should she go away or die,  
What would become of me?

*Selected.*

"I CAME up here my friends to greet;  
To make a speech I'll try;  
And if I fail with smiles to meet,  
I'll wind up with—O fy!  
A little snow is very white;  
A little feather's very light  
I've made a *little* speech."

## UNCLE ROLLO'S ADVICE.

## ABOUT GOING TO SCHOOL.

**M**Y DEAR CHILDREN. I have just read the letter of Edward to the Editor of The Student, inquiring what had become of Uncle Rollo. I also saw the promise that I should give you more advice.

Well, children, it has been a long time, I know, since I have written any thing for you, but I had not forgotten you, and I am glad to know that some of you, at least, wish more advice.

The Editor was right when he said I am fond of children, and that I love good children best.

I suppose you are now attending school, so I will tell you a few things which good children ought to do.

You should go to school every day. Some children think it is no matter if they do stay away from school half a day, or a whole day each week, that they can learn just as well.

Now what would those children think if they were told some morning, "You must not eat any thing to-day, it is just as well to go without eating one day each week?"

Don't you believe they would consider it hard treatment to go without eating as often as they stay away from school?

They think it hard to starve the body, but they seem not to care how often the mind is deprived of its food.

You eat food, and the body grows till you become men and women; and if you study, the mind will grow till you have the minds of men and women.

But if you do not go to school, and do not learn your lessons, your bodies will grow faster than your minds, and when you become as large as men and women, your minds will be small like those of children.

Think of this, a man or a woman who does not know any more than a little boy or girl. Would you like to become such?

No, I know you do not. Then you should attend school regularly, and learn all the lessons well, or I fear your bodies will grow a great deal faster than your minds.

Now, you do not like to live a day without eating, and I hope you will try to not live a day without learning something.

But you should remember what you learn, if you would have it do you good.

"How can I do it?" you may ask.

I will tell you some things that will help you to remember what you learn. You must think about it. If you have a brother or sister, talk with him or her about it.

Tell what you have read, and what your teacher said about it. Talk with your mamma, and your papa, also, about your lessons. All these things will help you to remember what you learn.

## Drawing Department.

### SCHOOL EXHIBITIONS.

THE schools of the Public School Society of New York hold semi-annual exhibitions, at which they are represented by specimens of drawings, maps, and penmanship. These are spread out and arranged in the order of the number of the school, occupying the desks and walls of a large school-room in a central locality, and thus exhibited for examination by pupils and teachers. For the preparation of these specimens one hour each week is devoted to it in each school.

It is customary, on these occasions, to appoint a committee, who examine all of the specimens thus exhibited, and make out a report of their relative merits. Short speeches are made, interspersed with singing by the pupils.

One object of the exhibition is to produce a laudable spirit of emulation in these artistic efforts, and another is to aid in carrying on an exchange of these products with other schools. Such a plan, entered into with a right spirit, and carried on with system, will be of much benefit to schools that engage in it.

We think it would be well also to have declamations and compositions from the pupils of each school, as this would add interest by giving a greater variety to the exercises. Let the pupils, who engage in writing and drawing, of several schools in a town, assemble twice a year for such an exhibition, and let some of these specimens be exchanged, and it would awaken a new interest on these subjects. With proper management no study need be neglected to carry out this plan: let one or two hours, and even a half-day each week, if needed, be devoted to drawing, mapping, declamation, and composition. This would be sufficient, with what time the pupils choose to spend out of school, to get up a very interesting exhibition, and it would furnish an effectual stimulus for improvement.

It is now the early part of the winter term of most schools, and a good time to commence preparing for such an exhibition. Teachers, confer with each other on the subject, and try what you can do. Your efforts may appear feeble at first, but often great results are produced by what once seemed to be fruitless labor. Make the trial, and let us know the result.

On Saturday, the 8d day of November, the public schools of New York held their semi-annual exhibition. Besides the specimens sent in from the public schools in this city, we furnished a table with specimens which have been sent for exchanges from schools in some six or eight different states. Specimens were exhibited which had been received from Washington, D. C., and also some from missionary schools in Greece and in Africa.

It is pleasing to witness the interest of children in looking at the specimens which come from schools in other states, and even from other countries. After beholding the curiosity excited, and the animation thus enkindled, who can doubt of its beneficial results?

### NOTICES OF EXCHANGES.

From the pupils of Miss H. A. Carver, Shrub Oak, Westchester County, N. Y.: Julia A. Conklin, aged 14; Sarah R. Curry, 14; Margaret A. Purdy, 12; Jane S. Curry, 12; Sarah J. Reed, 13. The pupils of this school have made much improvement in drawing since sending their last specimens. Please to send us more, Miss C., and we will try to find room to notice them in better season.

From Piqua, Ohio, we have received some sheets of leaf impressions, and, like many others, too much ink has been used. We think Mr. B. has made a mistake in regard to our proposition. He will please read that proposition in the June number of the Student.

We have recently received three more sheets of leaf impressions from William Battin, of Hanoverton, Columbiana County, Ohio. These contain more of those *large* leaves.

From the pupils of Mr. G. H. Stebbins, principal of a Public School, Brooklyn, N. Y.: William Holman, aged 12; Edward W. Cooper, 14; George B. Staley, 12; Thomas B. Dixon, 14; Hugh Goodwin, 14; Harriet Grundy, 14; Rodney Babbitt, 9; Charles Hammond, 11; George B. Dixon, 10. Thank you, friend Stebbins, for those drawings. Will you not furnish us some smaller ones? they will be more convenient for exchanges; those about the size of a common letter envelope are best adapted for this purpose.

## Phonography.—Lesson 8.

BY C. J. HAMBLETON.

## ST AND STR LOOPS.

THE combinations *st* and *str* are represented by loops joined to the consonant signs, either at the end or beginning. The *st* loop is made half the length of the stem to which it is attached, and the *str* two thirds the length. The *st* loop is thickened a little for *zd* at the end of a word.

The loops are added to both full and half length stems, on the same side as the *s*-circle. The *st* loop, when on the opposite side of a stem, at its beginning, combines with the *r*-hook series, and when on the opposite side, at the end, it combines with the *n*. Examples: steam; faster; greatest; stager; chanced.

The *str* loop is never used at the beginning of a stem. When placed on the opposite side, at the end, it combines with the *n*, the same as the *st* loop. The loops are vocalized in the same manner as the *s*-circle. The vowels are placed on the outside of the *st* loop, but they may be placed within the loop *str*.

*S* or *z* may be added to the *st* or *str* by continuing the loop through the stem, and forming a circle on the opposite side; thus, posts.

*S-shn* at the end of a word is represented by continuing the circle through the stem, and making a hook on it; as position. If the circle is made on the *n*-hook side of the stem the *n* is embraced, as compensation. *S* may be added to this termination by making the circle on the end of the hook, as conversations.

Words beginning with *in* followed by *spr*, *str*, or *skr*, are written by making a small hook and then the *s*-circle on the *r*-hook side of the stem, as instruction.

The combination *mp* is frequently represented by the *m* being made heavy, as impulse. The circle made twice the size of the *s*-circle represents *siz*, *ses*, and if made heavy it represents *siz*, *sez*, *siz*, *zez*. Examples: chooses; tenses; but these are never made at the beginning of a word.

## HOOK, HALF-LENGTH, AND OTHER WORD-SIGNS.

principle-al	{important-ce* improve-ment
re-member	first
truth	is
sure	as
pleasure	{object* subject
from	{God* good
very	establish-ment
every	after
there, their	word
nor	{without* that
{re-mark* more	immediately
full	{not* represent
{ac-knowledge* only	under
upon	spirit
been	{particular* opportunity
done	told
general-ly	toward
can	short
alone	accordingly
opinion	Lord
phonograph-y-ic	great, grate
occasion	gentleman-ly
objection	{cannot* account
already	

\* In all cases where the same character stands for two words, it is written *above* the line to represent one, and *on* the line to represent the other. The characters representing the upper words, as inclosed in brackets, are to be written above the line; those below are to be written on the line.

## Editor's Table.

### JENNY LIND'S CONCERTS.

SINCE her return to this city, Jenny Lind has been giving from three to four concerts each week, in Tripler Hall, the finest concert-room in America. Notwithstanding that hall will accommodate about 3,500 persons it has been filled nightly. The enthusiasm to listen to the Queen of Song, as she breathes forth those sweetest tones of music in all the simplicity of nature, is without a parallel.

Her goodness, generous benevolence, and artless simplicity all combine to make us admire her, and when we listen to her joyous song, warbling so like the carol of sweetest bird, and gushing forth in sunny gladness, we feel a deepening sensation of melody dawning upon us, till it beams forth in a full tide of meridian splendor. Then all is so simple, so in unison with the sweet harmony of nature, that it seems like the spontaneous flowing of her own joyous, musical soul—as if she sang because she could not help it.

Her singing is wholly unlike that of any other; we can compare it with nothing but nature. At times it is poured forth in volumes of richest melody, and rolls over the audience like mighty waves; then it breathes soft as the gentle whisper of the lulled storm, fainter and fainter, till vanished in air. And anon it gradually swells, as from the softest zephyr to the powerful gale, sweeping past and lost in the distance. It does not flash and astonish, like the brilliant meteor that darts athwart the skies, but like the dawning light of day steals almost insensibly upon the listeners, filling them with deep and yet deeper admiration.

Most of her songs are performed in Italian, but occasionally she delights us with English words. And when she breathes forth those sacred melodies, "I know that my Redeemer liveth," "On mighty pens," "Come unto Him," there is a serenity of style, a purity of manner and sentiment, full of profoundest faith, that flows forth like the deep gush of divinest mind.

Then her appearance, as she comes before such large audiences, is so full of childlike simplicity, and so free from every thing like formality and affectation, that she is indeed worthy of being called the child of nature as well as the child of song.

### SCHOOL VISITATIONS.

UNDER this head we intend giving, from time to time, brief notices of our visits to schools. Our object in doing this will be the furnishing of practical hints for teachers, by means of the notes thus taken. We doubt not that teachers in all parts of the country would be glad to learn something of the *modus operandi* of schools in New York and vicinity; and it shall be our chief aim to tell *how* teachers do, rather than *what* they do. Yet our objects will not often lead us to speak of defects; it is the *useful* and not the *useless* that we wish teachers to know and practice. However, thoughts may often be suggested, and expressed with a view of presenting principles which should govern teachers, and be the aim of their labors.

Public School No. 7, York street, Brooklyn, N. Y., is attended by 1,200 pupils, of ages from five to sixteen. DAVID SYME, A.M., late principal of Mathematical Department and lecturer on Natural Philosophy and Physiology in the Grammar School of Columbia College, New York, is the principal, and has fourteen female assistants. He has had charge of this school a little more than a year, and though situated in one of the most unfavorable localities, and attended by children of the poorer class, the pupils are undergoing a process of thorough training and mental discipline that is producing remarkable developments.

On entering and leaving the school-room the pupils observe good order—all go in single file. The class in mental arithmetic, which we heard examined, was quite large. During the recitation the teacher repeats a question without any pupil knowing which will be called upon to solve it. When a boy is designated he rises, repeats the question, then solves it in a very plain and lucid manner, gives the answer, and takes his seat. Then another question is repeated, and another pupil is called upon, and he proceeds in the same manner as the first, and so on through the recitation. No book is allowed the pupils while reciting.

There was a remarkable equality of attainments among this class of pupils. A few good scholars did not act as representatives, and do all the work. Each pupil seemed to have a clear understanding of every step taken. Thoroughness of mental discipline, a practical knowledge, and a preparation for the duties of life were prominent characteristics noticed.

Composition and declamation are practiced alternately each week. Our visit was on the day for declamation. Seldom have we heard boys of like ages excel in this branch what we witnessed there. The practice of declamation, when the pupils are instructed to bring out the sentiment with correct emphasis and proper intonations, is an excellent one.

#### NOTICES OF PUBLICATIONS.

**ELEMENTS OF NATURAL PHILOSOPHY**, designed as a text-book for Academies, High Schools, and Colleges. By ALONZO GRAY, A. M. Published by Harper & Brothers, New York. 12mo; pp. 405. 1850.

This work is intended as a medium between the larger works on philosophy and those in general use, and includes a larger amount of modern science than is usually found in text-books on this subject. It also contains examples in the form of problems, in order to render such principles familiar, as the student proceeds, and to enable him to make a *practical application* of his knowledge—a very important part of the study, yet one too much neglected.

**THE ONE LINE PSALMIST**; also, the **SIGHT-SINGING MANUAL**. By H. W. Day, A. M. Published at Boston, Mass., at No. 8 Court Square.

These works embody the principles of the system of Messrs. Day and Beal's "One Line Notation and Sight-Singing," introduced into Boston some three or four years ago. By this system *one line* is substituted for the *five* which constitute the staff now in common use; and on this line, or above, or below it, as the interval may require, are placed figures representing the sounds of the scale, which the numerals designate. By this method three tunes are placed in less space than is ordinarily required for two, by the common system, but the general appearance is far less pleasing to the eye.

We can not perceive that there is any *less to be learned* by this system than by the one we have been accustomed to; but the inventors claim that they have so simplified the method of instruction, that "*beginners* have learned, in a single evening, to sing by sight tunes which they have never seen before."

**THE PRACTICAL ELOCUTIONIST, and Academical Reader and Speaker**; designed for the use of Colleges, Academies, and High Schools. By J. W. S. HOWS. Published by Geo. P. Putnam, 155 Broadway, New York. 12mo; pp. 430.

The system of elocution laid down in this work is brief, concise, and practical. The author has here endeavored to divest this art of much of its artificial character, and of those arbitrary mechanical rules which lumber too many systems of elocution. We agree with the author, that "a strictly practical system of elocution is required for the student of the present day; one that shall be direct in its application and easy of attainment; or, rather, the pupil should be directed to the true principles which alone govern the art, rather than to any arbitrary system which elevates mechanical rules above the promptings of *nature*, and the operations of the *mind*."

The selections of this work are of the highest character, and embrace a wide range of subjects, calculated to develop a sound patriotism, and a healthy, manly tone of feeling and sentiment.

**BURRITT'S GEOGRAPHY OF THE HEAVENS, AND CLASS-BOOK OF ASTRONOMY**, accompanied by a **CELESTIAL ATLAS**. Revised and corrected by O. M. MITCHELL, A. M., director of the Cincinnati Observatory. Published by Huntington & Savage, 216 Pearl street, New York.

Owing to the extraordinary discoveries in astronomy which have taken place within the past few years, it became necessary to have changes made in the text-books designed for instruction on this subject. For this reason that popular work, "Burritt's Geography of the Heavens," has been thoroughly revised, and many portions re-written, by an able astronomer, who stands second to none in this country. Much additional valuable matter has been added, and a new Atlas prepared, which comprises twenty-four star-charts. This is probably the most complete and reliable work now published for instruction in this interesting science.

**THE ALPINE GLEE SINGER**; a complete collection of secular and social music, arranged in four vocal parts, for choirs, singing classes, and musical societies; with a full course of vocal exercises for the cultivation of the voice, and for improvement in musical intonation. By WILLIAM B. BRADBURY. 304 pages. Published by Mark H. Newman and Co. 199 Broadway, New York.

This is a new glee book, containing a great variety of Swiss and Tyrolean melodies, harmonized, and popular German songs, as well as English, Scotch, and American popular songs, together with many of Mr. Bradbury's choicest original secular pieces. It is well adapted for social singing classes and musical societies, and must become a popular work. The words are of a high moral tone and pure sentiment, and can hardly fail to make the heart better and the life happier, of him who breathes them forth with their beautiful melodies.

**THE IMMORTAL**; and other Poems. By JAMES NACK; with a memoir of the author, by Geo. P. Morris. Published by Stringer & Townsend, 222 Broadway, New York. 12mo., pp. 172. 1850.

The author of *The Immortal* was deprived of his birth when less than nine years of age. From his own condition, or some other cause, his poems breathe a spirit of gloominess over this life, which seems all too dark, even as a contrast to the happiness which may be enjoyed in a life to come.

**HARPER'S NEW MONTHLY MAGAZINE**; published on the first of each month by Harper & Brothers, 82 Cliff street New York, at \$3 00 a year, or 25 cents a number.

Each number of this magazine contains 144 pages, octavo double columns. The November number closes the first volume, comprising six numbers. When bound, each volume forms a handsome book of 864 pages, combining entertainment with much valuable instruction.

**THE CLAYTON READING BOOK**; prepared for the use of schools. Published by George P. Putnam, 155 Broadway, New York. 12mo, pp. 255.

This work comprises choice selections from the various writings of WASHINGTON IRVING, consequently must prove an interesting class-book. It is printed on large, neat type, and excellent paper.

**THE TWELVE QUALITIES OF MIND**; or, Outlines of a New System of Physiognomy. No. 2. By J. W. REDFIELD, M.D. Published by J. S. Redfield, Clinton Hall, New York. Price 25 cents.

The author of this work professes to teach the art of reading character by the face and the external man. How well he has succeeded we presume not to say, for we have not read the book.

### THE STUDENT'S SONG.

**Music from the German.**

**Written by W. E. Hickson**

*f* *p*

1. Now blithe the song, a mer - ry greet-ing, Sing tral la la la la la la ;  
The notes in - spi - ring joy re - peat-ing, Sing tral la la la la la la ;

2. 'Tis well for thought to find a sea - son, Sing tral la la la la la la ;  
For think-ing al - ways there's no rea - son, Sing tral la la la la la la ;

3. Tho' care will come, or trib - u - la - tion, Sing tral la la la la la la ;  
We'll sigh not in th'an - tic - i - pa - tion, Sing tral la la la la la la ;

*f*

Let mirth to wis - dom trib - ute pay, But yet be mer - ry while you may  
We ga - ther knowledge from the past, To make life hap - py while it last.

For joy will soon each grief dis - pel From hearts where love and friend - ship dwell.

*p* DUET. *mp* Orcs.

Sing tral la la la la la la, Sing tral la la la la la la, Sing  
 Sing tral la la la la la la, Sing tral la la la la la la, Sing

Sing tral la la la la la la, Sing tral la la la la la la, Sing

CHORUS.

tral la la la la la la, . . Sing tral la la la la la la.  
tral la la la la la la, . . Sing tral la la la la la la.

tral la la la la la la, . . Sing tral la la la la la la.



## SCHOOL ARRANGEMENTS.

BY WM. F. PHELPS.

"ORDER is Heaven's first law." In no department of human life is the necessity for the observance of this law more apparent than in that of education. Called to work upon imperishable material—to make upon it impressions as lasting as that material itself—to develop in harmonious beauty all those powers which find their sublime center in the human organism, the teacher is bound by every consideration that can render his profession sacred and responsible, to adopt and properly to use those means which will secure in the highest degree the accomplishment of the great end in view.

He should, therefore, first ask himself, "What is the true nature of the work given me to do?" Unless this question is fully settled in his mind—unless he has clear conceptions of the real object of education, he is as totally unfit for the duties of his calling as would be that pretended builder who never had even seen a house, and who yet expected to bring forth from the shapeless mass of materials committed to him an edifice symmetrical and beautiful, and made meet for its master's use.

Again, unless this question is thoroughly understood, although he may possess a knowledge of the means to be adopted, yet he will be unable properly to use those means, and hence his teachings will be but as "sounding brass and a tinkling cymbal"—will tend to pervert rather than to cultivate the powers that are confided to him, as "clay in the hands of the potter, to mold and shape at will." Let, then, the conscientious teacher first understand the nature of his great work.

Secondly, *He must inquire what are the best means for the accomplishment of this work, and how shall those means be directed?* After answering satisfactorily the first question, the solution of the second can neither be dubious nor difficult, if his own mind has received that careful cultivation so indispensable for all who aspire to his high office. He understands already that the true means for educating, *developing* the powers of the human being, are those which *secure their judicious and vigorous use*; that to train the mind, its faculties must be *properly directed to the pursuit of knowledge*. But how are they to be properly directed to such pursuit? It is answered, in the first place, that *they must be understandingly directed*, or, to repeat a proposition which can not be too often reiterated, *nothing should be learned that is not thoroughly understood*. This is the first condition of judicious use.

The second is, that *they should not be too long exercised*; and the third, that *they should be systematically or regularly exercised*. These principles can not be too thoroughly engraved upon the mind and heart of the teacher, neither can they be too truly and faithfully exemplified in his daily practice. They constitute the only true foundation upon which can be built all those arrangements that are to facilitate the proper exercise of the intellectual and moral powers of the young, in our schools.

Composed, as these schools are, of a great number and variety of individuals, all of whom are to be wrought upon by the skillful hand of the instructor, how necessary does it become that his labors be well and system-

atically planned. With a true conception of the nature, magnitude, and responsibility of the duties that attach themselves to his profession—with his pupils properly classified, and his school in all other respects organized, he applies himself to the construction of a programme, which shall be adapted to his circumstances, and to the nature of the object to which all his labors are tending.

But upon what principles should a programme of school exercises be constructed? for principles there are which regulate, or should regulate, this important matter. It is not to be a mere work of fancy, or chance, or convenience simply. It is one of necessity—one which results from the very nature of the employment in which the scientific teacher is engaged. We repeat, a programme, to be right, must be founded in nature.

The considerations that must guide us in this matter are the following:

1st. *That it must be so arranged as to secure a sufficient time, and a regular time for the vigorous exercise of the faculties of the mind.*

2d. *So as to secure alternate periods of recitation and repose.*

3d. *So as to secure attention to all those departments of knowledge which the pupil may be pursuing, provided they be such as he is qualified to pursue.*

4th. *It must be constructed with reference to the number and character of the classes to be taught, and the length of time to be devoted to the instruction of the school.*

Finally. *It must be so constructed as to dispense the greatest amount of good to the greatest number of pupils.*

Another idea it may not be amiss in this place to mention, viz., that some exercises are, from their very nature, better adapted to certain hours of the day than others. For instance, in the morning, when all are fresh and vigorous, such an exercise as reading and even spelling would come more appropriately than during the latter part of the day, as is frequently the case, when the pupil is weary, inattentive, and restless. Such recitations as in themselves require or command attention should take place during the later hours of each session. By choosing the less interesting branches of instruction in the morning, attention to them is more easily enlisted, for at that hour it requires, on the part of the pupil, less effort to control it.

But we reserve further remark until a programme is presented, as our comments will in that case, perhaps, be better understood. The limit assigned this communication will not now permit us to go further, and we shall continue the subject in a succeeding number.

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THE POSTAGE on this paper is only one cent, or 12 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 18 cents a year beyond those distances.

# THE STUDENT.

## THE REALM OF THOUGHT.

BY MISS ELIZABETH S. WATERMAN.

**T**HOUGHT! what is it? 'Tis the silent language of the heart, the soft and gentle breathings of our nature, the spring whose waters tell us of the fount from whence they flow. 'Tis a power that calls forth glorious and immortal shapes, and robes the dreamy visions of the soul in a life-like presence. 'Tis an immortal principle, a celestial fire destined to burn and glow forever.

Thought! 'tis a heaven-born gift,

"Though chained to earth,  
Of nobler birth  
And destiny."

In life's loveliest solitudes, it comes over the soul like angel's music; in life's darkest scenes it pictures all things lovely; and to the spirit saddened by earth's grievous sorrows there returneth hours of freshness, triumph, and joy—

"—the hours of sober, quiet thought,  
With sad, sweet pictures ever fraught."

But thought folds not its wings beside the household hearth, neither broods with fostering care over life's petty troubles. Then where is its realm? Is it earth, the gemmed blue sky, or the silent deep? Earth is but its throne, while the vast universe of mind and matter is the realm through which it roams free and unfettered.

With the parent gazing on the couch of infant beauty thought wanders to its future fame and worth, its filial love, the sunshine of which shall enlighten and cheer his descent to the tomb. With the lone-some mariner, while in his frail bark on polar seas, where nothing but the towering iceberg looms on his wearied sight, thought crosses the fathomless deep, revisits his loved home, and thus wanders in its realm till he forgets that he is in a region whose only minstrelsy is the wind and waves.

Thought roams through chaos and a world unborn, visits creation's early dawn,

when the morning stars tuned their first anthems; wanders down the tide of time, treads empires in the dust, sports with the "hoary locks of ocean, or the lightning's fiery wing." 'Tis in this realm the poet breathes forth those burning words which are like incense to the wind, or music on the tempest. The incense may be borne afar off, but it will yet breathe sweetness on some weary brow; the melody may be wasted on the blast, yet some faint notes will reach and cheer a brother's sinking heart.

Well would it be could we ever wander in the realm of pure and holy thought. Well would it be if sin never mingled with the sweeter music of our gentle fancies. But, alas! the mists of earth often rise and surround us; impure associations and splendid but deceptive imagery, decked in the drapery of virtue, steal upon the soul and possess its sacred citadel. Thus is the spark of celestial fire dimmed upon its very altars; thus is thought unhallowed, and its realm the home of evil.

Yes, too oft the tempter rules, and tears its victim from the realm of purity and truth; too oft does the soul measure out to its earthly treasures an undue portion of its idolatry, while lofty imaginings give place to groveling thoughts, and high and holy communion is exchanged for the sullen murmurs of ingratitude and sin. Anger with her lighted torch kindles the flame of resentment in the breast; flattery breathes into the ear her enchanting and intoxicating whispers, while discontent lays her "leaden hand" upon the temper to mold the mind to her control.

To dwell in such a realm casts a blight upon all that is lovely in man. A cold winter frowns upon the summer of the human heart, and its social and affections wither and die.

realm of pure and holy thought, where the mind may wander beyond and above the beaten, dusty, weary walks of life, to a purer world and a happier sphere. 'Tis here that, sickened of life, the soul withdraws from the world's busy strife to its reveries, and there creates an existent and ever-during sphere of its own.

It reveals the loveliness of nature, brings back the freshness of early feelings, and keeps unquenched the fire which warmed the spring-tide of our being. 'Tis here we lose ourselves in ideal forgetfulness: forgetfulness? nay, 'tis memory—memory in its purest, loveliest essence, which even rouses visions from the grave of ages, and brings them rejoicing into the world of life and light.

Glorious, happy thought! with thee we can wander o'er earth's fairest scenes; can climb the rugged hill, stem the boisterous wave, tread the vast spaces of the lonely desert, or penetrate the inmost recesses of the dreary cavern. With thee we can turn to the illimitable past, can see those who have lived and loved, reveled and died, and are now reposing in one mighty sepulcher. We can recall the days of chivalry, the tournament and the battlefield; can trace the hand of an unerring Providence blotting out the last vestige of empires, or causing the wilderness to blossom as the rose; can visit the peaceful asylum of our younger days, and wander o'er the sunny hills and beside the purling streams trodden by the feet of our childhood. With thee can we unlock the portals of the future, lift the curtain of the grave, and read the mysteries beyond.

Truly, the gift of thought is a glorious one, and, like all that was first created, pure and sinless, designed to promote man's happiness and peace. But thought has become an instrument of the arch enemy; yet if it wander in a proper realm, it may be to us like the star of Bethlehem—a guide to lead us to the shrine of our Maker.

Why then roam with thought over the phantom pleasures of earth?

Why not indulge such thoughts as swell our hearts  
With fuller admiration of that Power  
Our hearts with such high thoughts to swell!"

hark! the evening prayer,

the hourly incense of the soul, avail nothing when breathed upon an earthly shrine. Then may the realm of thought be pure and holy; a realm that will lead us to learn lessons of duty from our very pleasures, and gather wisdom and virtue from our every delight; a realm in which we may hold sacred communion with the hidden things of the unseen heart; a realm reaching beyond the swift-departing mockeries of the world to the Author of the priceless treasure of thought, so that when the past comes o'er us in pleasantness, and hope, and beauty, and we ask of the future where is this realm? thought will lead through the dark portals of the grave to a better home and a purer realm, where sin shall cease, and thoughts dark and fearful ne'er intrude, but where holiness, happiness, and joy, like a perpetual spring, forever bloom.

• And thus may thought roam in a realm of purity here below, till death shall hush the last voice, and wearied mortals shall tread no more an earthly path; then may it wake in a higher sphere, a companion of seraphs, to worship at the shrine of that Being who maketh the earth His footstool, the heavens His throne, the thunder His voice, and the clouds His chariot, there to breathe forth from the golden wires of celestial harps the sweet, and long, and lofty strains of immortality.

[The preceding essay, by a pupil from Columbia County, N. Y., was read, Oct. 8, 1850, at the closing exercises of the New York State Normal School, Albany, N. Y. *Tourna-ment*, a mock fight, or military sport, in which a number of combatants engage as an exhibition of their address and bravery.]

## THE HOUSEHOLD JEWELS.

FROM DICKENS' HOUSEHOLD WORDS.

A TRAVELER, from journeying

In countries far away,

Repassed his threshold at the close

Of one calm summer day.

A voice of love, a comely face,

A kiss of chaste delight,

Were the first things to welcome him,

On that blessed summer night.

He stretched his limbs upon the hearth,  
 Before its friendly blaze,  
 And conjured up mixed memories  
 Of gay and gloomy days;  
 And felt that none of gentle soul,  
 However far he roam,  
 Can e'er forego, can e'er forget,  
 The quiet joys of home.

"Bring me my children!" cried the sire,  
 With eager, earnest tone;  
 "I long to press them, and to mark  
 How lovely they have grown.  
 Twelve weary months have passed away  
 Since I went o'er the sea;  
 To feel how sad and lone I was  
 Without my babes and thee!"

"Refresh thee, as 'tis needful," said  
 The fair and faithful wife,  
 The while her pensive features paled,  
 And stirred with inward strife;  
 "Refresh thee, husband of my heart,  
 I ask it as a boon;  
 Our children are reposing, love;  
 Thou shalt behold them soon."

She spread the meal, she filled the cup,  
 She pressed him to partake;  
 He sat down blithely at the board,  
 And all for her sweet sake.  
 But when the frugal feast was done,  
 The thankful prayer preferred,  
 Again affection's fountain flowed,  
 Again its voice was heard.

"Bring me my children, darling wife,  
 I'm in an ardent mood;  
 My soul lacks purer aliment,  
 I long for other food.  
 Bring forth my children to my gaze,  
 Or ere I rage or weep,  
 I yearn to kiss their happy eyes  
 Before the hour of sleep."

"I have a question yet to ask;  
 Be patient, husband dear;  
 A stranger, one auspicious morn,  
 Did send some jewels here;  
 Until to take them from my care,  
 But yesterday he came,  
 And I restored them with a sigh—  
 Dost thou approve or blame?"

"I marvel much, sweet wife, that thou  
 Shouldst breathe such words to me;  
 Restore to man, resign to God,  
 Whate'er is lent to thee.  
 Restore it with a willing heart,  
 Be grateful for the trust;  
 Whate'er may tempt or try us, wife,  
 Let us be ever just."

She took him by the passive hand,  
 And up the moonlit stair;  
 She led him to their bridal bed,  
 With mute and mournful air.  
 She turned the cover down, and there,  
 In grave-like garments dressed,  
 Lay the twin children of their love,  
 In death's serenest rest.

"These were the jewels lent to me,  
 Which God has deigned to own;  
 The precious caskets still remain,  
 But, ah! the *gems* are flown.  
 But thou didst teach me to resign  
 What God alone can claim;  
 He giveth and He takes away,  
 Blest be His holy name!"

The father gazed upon his babes,  
 The mother drooped apart,  
 While all the woman's sorrow gushed  
 From her o'erburdened heart;  
 And with the striving of her grief,  
 Which wrung the tears she shed,  
 Were mingled low and loving words  
 To the unconscious dead.

When the sad sire had looked his fill,  
 He vailed each breathless face,  
 And down in self-abasement bowed,  
 For comfort and for grace;  
 With the deep eloquence of woe,  
 Poured forth his secret soul,  
 Rose up, and stood erect and calm,  
 In spirit healed and whole.

"Restrain thy tears, poor wife," he said;  
 "I learn this lesson still—  
 God gives, and God can take away:  
 Blest be His holy will!  
 Blest are my children, for they *live*  
 From sin and sorrow free.  
 I am not all joyless, wife,  
 With faith, hope, and thee."



HORACE GREELEY.

**H**ORACE GREELEY was born at Amherst, N. H., February 3d, 1811, and is the eldest survivor of seven children. He has a brother and three sisters now living. His father and mother were both natives of New Hampshire, and descendants of the early settlers of that state. His ancestors were farmers, and those on his father's side were in limited circumstances.

When not quite three years of age, Horace was taken to spend the winter in the family of his maternal grandfather, with whom he was a favorite. After the novelty of a visit had worn off, he was sent to a district school a few rods distant; but not so much with the hope of his learning any thing as to diminish the trouble of looking after him in a large family of grown persons. But having been previously taught the alphabet he made rapid proficiency in spelling and reading.

At four years of age he could spell and

read creditably, and at five he was considered equal in those branches to any pupil in the school. In the district where his father resided the school was about two miles from his home, so he spent from two to four months each summer and winter, until he was six years of age, with the family of his grandfather, and attended the school near.

Though he made rapid advancement in spelling and reading, yet he did not succeed so well with some of the higher branches. He commenced the study of English grammar at the age of five, but he did not comprehend it until eight, and it was still later before he understood it well. In geography, such as the location of places, he was not proficient, yet the historical and statistical information connected therewith he readily acquired and retained.

As for penmanship, it seemed to defy all his exertions, and even to this day his writing is such that but few persons can

read it without difficulty. The multiplication table he learned at so early an age that he can not remember the time when he did not have it at his command. In the study of arithmetic he made rapid progress. This was probably owing chiefly to his thorough knowledge of the multiplication table, for this study seemed to him only applications of and deductions from that table.

His school-days of summer ended with his seventh year, after which time he was kept at home to assist on the farm. He continued to attend school for a few months in winter until his fourteenth year, yet even this season was often interrupted by periods of labor. He never has attended any other than a rural common school, and not even such after the age of fourteen. And the common schools of that day presented far less advantages than they do at the present time.

When Horace was not quite ten years of age his father lost his little property in New Hampshire, and removed to West-haven, Vt., near the head of Lake Champlain. He remained here about six years. The first two were employed in clearing land upon contract, with the aid of his sons—Horace and N. Barnes Greeley. The next year he spent attending a saw-mill, while his boys worked on a small farm. The residue of the time at West-haven was spent in clearing land and farming upon shares.

At eleven years of age, Horace made his first attempt, at Whitehall, N. Y., to find employment as an apprentice in a printing office, but he was rejected on account of his youth. Owing to the necessities of a life of poverty his assistance was needed at home, and he remained there for several years, still entertaining, however, his intentions to make printing his vocation.

Notwithstanding he had such limited advantages of attending school, he determined to obtain learning, and he industriously devoted his spare moments to reading and study. He was favored by his neighbors, who possessed ampler resources, with the loan of books and periodicals, and these he perused with great interest. Even during those long days of summer, which

so severely tax the sinews of youth, he could now and then catch up a book for a few moments.

But it was during the long winter evenings that he made the greatest progress in his studies. Then he laid the foundation of prosperity by a strict self-culture, which has seldom, if ever, been excelled by any young man in similar circumstances. His early perseverance is a worthy lesson to the youth of America. His is a noble victory of mind over an humble birth and pecuniary circumstances.

At the age of fifteen Horace was permitted to gratify his long-cherished desire, and on the 18th of April, 1826, he entered, as an apprentice, the printing office of the Northern Spectator, at East Poultney, Rutland County, Vt. Here he remained until June, 1830, when the paper was discontinued.

In the autumn of 1826, his father removed his family to Wayne, Erie County, Pa., where they still reside. Horace visited them in 1827, also in 1829, and repaired thither on leaving East Poultney, in 1830. He now spent a little more than a year alternately between working at his trade in Jamestown and Lodi, N. Y., and Erie, Pa., as opportunity offered, and laboring on his father's rude farm.

Not being able to find steady employment at his trade in that region, in August, 1831, he came to the city of New York, and has resided here ever since. For the first eighteen months after his arrival here he worked at his trade as a journeyman. Early in 1833, in connection with another young printer, he purchased materials, and undertook the printing of a cheap daily paper for another person, but that soon failed, and other printing was procured.

His first partner was drowned in July, 1833; another took his place, and the concern was moderately prosperous. In March, 1834, they issued the first number of the New Yorker, a weekly journal, devoted to popular literature and a summary of transpiring events. At this time he was almost without friends, and in a city where he was hardly known beyond his circle of boarding-house acquaintances, and a limited number of business associates.

The New Yorker was continued through

seven years and a half, attaining, at one time, a circulation of over nine thousand, and averaging more than five thousand throughout the entire time of its publication. But it was never pecuniarily profitable, owing principally to bad management in the publishing department.

In April, 1841, in connection with Thomas M'Elrath, he started the New York Daily Tribune, and in September following the New Yorker was merged into the weekly issue of the New York Tribune. In the management of this paper both Horace Greeley and Thomas M'Elrath are still associated, the former having charge of its editorial management, assisted by several able literary gentlemen.

Horace Greeley was married in July, 1836, to Mary Y. Cheney, of Litchfield, Conn. They have had five children, of whom only one survives. In 1848 he was chosen a representative to Congress. His term of office expired in March, 1849.

He is now nearly forty years of age, about five feet ten inches in height, slender in frame, stooping in gait, of light complexion, and has thin, light hair. In personal appearance he is careless, seeming to have few, if any, thoughts about his dress. His countenance wears a smiling and thoughtful appearance.

As an extemporaneous speaker he is not fluent; he seems to have an abundance of thoughts without a ready command of words to express them. But his written addresses are delivered in a more easy style, and abound in eloquent passages. As a writer he is bold, vigorous, and comprehensive. He eschews apologies, and seldom prefaces his speeches or writings, but comes at once to what he wishes to communicate.

He is strictly temperate in his habits. In his fourteenth year he renounced the use of intoxicating beverages, and discontinued the use of tea and coffee in his twenty-ninth year. He opposes the use of tobacco in all its forms. Of his health he takes good care, and, notwithstanding the unremitted labors that devolve upon him, he seldom has cause to resort to the use of medicine.

Horace Greeley is a self-made man. Though deprived of the advantages of

even a common school, after the age of fourteen, he has been a student in the school of life, and gathered knowledge amid the stern encounters of a rugged world. By an unyielding perseverance he has risen above the circumstances which seemed sufficient to discourage ordinary efforts. His early struggles, his later trials, and his subsequent triumphs, afford lessons of encouragement for those who would battle with life's difficulties and labor to overcome them.

### EDUCATE YOUR CHILDREN.

**T**HE following extract ought to be read and pondered by every parent:

If the time shall ever come when this mighty fabric shall totter; when the beacon which now rises in a pillar of fire, a sign and wonder of the world, shall wax dim, the cause will be found in the ignorance of the people.

If the union is still to continue to cheer the hopes and animate the efforts of the oppressed of every nation; if our fields are to be untrod by the hirelings of despotism; if long days of blessedness are to attend our country in her career of glory; if you would have the sun continue to shed its unclouded rays upon the face of freemen, then *educate all the children in the land.*

This alone startles the tyrant in his dreams of power, and arouses the energies of an oppressed people. It was intelligence that reared up the majestic columns of our national glory, and this alone can prevent them from crumbling into ashes.—*T. Fisk.*

### A GEM.

THERE'S not a heath, however rude,  
But hath some little flower  
To brighten up its solitude,  
And scent the evening hour.  
THERE'S not a heart, however cast  
By grief and sorrow down,  
But hath some memory of the past,  
To love and call its own.

TIME is the stuff that life is made of  
*use it all, and use it WELL.*

## Coats of Arms, or State Seals.—No. 9.



### MARYLAND.

**T**HE Seal of the State of Maryland is represented by the figure of *Justice* standing in the foreground, holding suspended in her left hand a pair of scales, while her right contains an olive branch, and rests on a sword. On the left, and back of her, are seen barrels, and farther in the distance a wide expanse of water, on which ships appear, on both sides of the figure of *Justice*. The distant horizon is lighted up by the brilliant rays of the sun.

While *Justice* offers the olive branch of peace, her hand still rests on the handle of the sword, as if in readiness to use it should more peaceful measures fail to secure equal rights on land and sea. The ships represent the commercial interests of the state, and the flour barrels the agricultural—wheat being one of the principal staple productions. This state has no motto, but around the seal are the words, **SEAL OF THE STATE OF MARYLAND.**

Maryland is bounded on the north by Pennsylvania, east by Delaware and the Atlantic Ocean, and south and west by Virginia. The southern outline is very ir-

regular, the boundary being formed by the Potomac River. The state is about *two hundred and twenty miles* in length, from east to west, and *one hundred and twenty miles* in width, from north to south. It contains an area of about 14,000 square miles, of which *one fifth* is water.

The Chesapeake Bay runs nearly through the state, from north to south, dividing it into two parts, which are called the *eastern shore* and the *western shore*. This bay is 270 miles long, from 7 to 20 miles wide, and furnishes many fine harbors. That portion of the state lying on the eastern shore of the Chesapeake is generally level and low, and in some places covered with stagnant waters, which give rise in the summer and fall to agues and intermittent fevers. The soil possesses considerable fertility, and produces a beautiful white wheat, Indian corn, sweet potatoes, and tobacco.

The country on the western shore, below the falls of the rivers that empty into the Chesapeake, is free from stones, and is very similar to that on the eastern shore. Above the falls the country becomes grad-



ually uneven and hilly, and in the western part of the state it is mountainous. Wheat and tobacco are the staple productions, but some cotton, of an inferior quality, is raised in the western counties. Apples, pears, peaches, and plums are abundant. The soil is generally of a red loam or clay.

This state is divided into *twenty* counties. The population is about 470,000, of which more than 100,000 are colored persons. The capital is Annapolis, situated on the Severn River, near the western shore of the Chesapeake. The largest city is Baltimore, and contains a population of about 140,000. Owing to the several splendid monuments here—Washington Monument, Battle Monument, and Armistead Monument—it has received the appellation of the “City of Monuments.”

The first permanent settlement was made in Maryland, under William Clayborne, in the year 1631, on Kent Island, opposite where Annapolis now stands. A charter was granted to Cecil Calvert (Lord Baltimore) by the English Parliament, conveying to him the country from the Potomac to the fortieth degree of north latitude. This territory was then named Maryland, by its proprietor, in honor of Henrietta Maria, queen of Charles I. Lord Baltimore appointed his brother, Leonard Calvert, governor of Maryland, and in 1634 he established a settlement on the Potomac, called St. Mary.

The Potomac River, which divides this state from Virginia, is 550 miles long, and is navigable to Washington City, a distance of about 300 miles from the ocean. Iron ore is found in various parts of the state, and extensive beds of coal exist in the mountains in the western part. This state has about 240 miles of railroads, and about 160 miles of navigation by canals.

There are five colleges in Maryland: Washington College, at Chestertown; St. John's, at Annapolis; St. Mary's, at Baltimore; St. James, near Hagerstown; and Mount St. Mary's, at Emmitsburg. St. Mary's and Mount St. Mary's are Catholic institutions; St. James is Episcopal, and the other two are Presbyterian. A medical school was founded at Baltimore in 1807. In 1812 the general sciences, law, and divinity were connected with it, and

the name of University of Maryland applied. Besides these there are about 140 academies and grammar schools, and 575 common and primary schools in the state.

The governor of Maryland is chosen by a joint ballot of both houses of the legislature for a term of *three years*. He must be twenty-five years of age, and have resided in the state five years. He is eligible only once in seven years. His salary is \$2,000. There is a council of five persons also chosen by the legislature to advise with the governor, and sanction or negative the executive appointments. These are also chosen for three years. The governor has no *veto* power upon the acts of the legislature. The elections are held the first Wednesday in October. The legislature meets the last Monday in December, once in two years.

### “GIVE ME BACK MY HUSBAND.”

BY ELIHU BURRITT.

**N**OT many years since, a young married couple, from the far “fast-anchored isle,” sought our shores with the most sanguine anticipations of prosperity and happiness. They had begun to realize more than they had seen in the visions of hope, when, in an evil hour, the husband was tempted “to look upon the wine when it was red,” and to taste of it “when it gives its color in the cup.”

The charmer fastened upon its victim all the serpent spells of its sorcery, and he fell; and at every step of his degradation from the man to the brute, and downward, a heart-string broke in the bosom of his companion.

Finally, with the last spark of hope flickering on the altar of her heart, she threaded her way into one of those shambles where man is made such a thing as the beasts of the field would bellow at. She pressed her way through the bacchanalian crowd, who were reveling there in their own ruin. With her bosom full of “that perilous stuff that preys upon the heart,” she stood before the plunderer of her husband's destiny, and exclaimed, in tones of startling anguish, “*Give me back my husband!*”

"There's your husband," said the man, as he pointed toward the prostrate wretch.

"*That my husband!*" she replied; "what have you done to him? *That my husband!* What have you done to that noble form that once, like a giant oak, held its protecting shade over the fragile vine that clung to it for support and shelter? *That my husband!* With what torpedo chill have you touched the sinews of that manly arm?"

"*That my husband!* What have you done to that once noble brow, which he wore high among his fellows, as if it bore the superscription of the Godhead? *That my husband!* What have you done to that eye, with which he was wont to 'look erect on heaven,' and see in his mirror the image of his God? What Egyptian drug have you poured into his veins, and turned the ambling fountains of the heart into black and burning pitch? *Give me back my husband!* Undo your basalisk spells, and give me back the man that stood with me at the altar!"

The ears of the rum-seller, ever since the first demijohn of that burning liquid was opened upon the shores, have been saluted, at every stage of the traffic, with just such appeals as this. Such wives, such widows and mothers, such fatherless children as never mourned in Israel at the massacre of Bethlehem, or at the burning of the Temple, have cried in his ears, morning, noon, and evening, "*Give me back my husband! Give me back my boy! Give me back my brother!*"

But has the rum-seller been confounded or speechless at these appeals? No, not he! He could show his credentials at a moment's notice, with proud defiance. He always carried in his pocket a written absolution for all he had done, and could do, in his work of destruction. *He had bought a letter of indulgence.* I mean a license—a precious instrument, signed and sealed by authority stronger and more respectable than the Pope's.

He confounded! Why, the whole artillery of civil power was ready to open in his defense and support. Thus shielded by the *Ægis* of the law, he had nothing to fear from the enemies of his traffic. He had the image and superscription of

Cæsar on his credentials, and unto Cæsar he appealed; and unto Cæsar, too, his victims appealed, but in vain.—*Selected.*

## YOUNG MEN.

BY MISS CAROLINE GILMAN

**T**HERE is no object so beautiful to me as a conscientious young man. I watch him as I do a star in heaven; clouds may be before him, but we know that his light is behind them, and will beam forth again. The blaze of others' popularity may outshine him, but we know that, though unseen, he illumines his own true sphere.

He resists temptation—not without a struggle, but he resists and conquers. He heeds not the watchword of fashion, if it lead to sin. The atheist, who says not only in his heart, but with his lips, "There is no God!" controls him not; he sees the hand of a creating God, and rejoices in it.

Woman is sheltered by fond arms and loving counsels; old age is protected by its experience, and manhood by its strength; but the young man stands amid the temptations of the world like a self-balanced tower. Happy he who seeks and gains the prop of morality.

Onward, then, conscientious youth. Raise thy standard, and nerve thyself for goodness. If God has given thee intellectual power, awake in that cause; never let it be said of thee, "He helped to swell the river of sin by pouring its influence into the channels." If thou art feeble in mental strength, throw not that drop into the polluted current.

Awake, arise, young man; assume that beautiful garb of virtue! Put on thy strength. Let truth be thy armor.—*Selected.*

## MYSTERIOUS PROPERTY OF LIGHT.

LIGHT comes to our eyes at a uniform rate; and it is proved, by aberration, to be propagated through space at exactly the same rate for all the heavenly bodies. Nothing disturbs the law that governs it; no cause interferes with it; and the contemplation of it must immensely exalt our ideas of divine intelligence.

## Science,

"Finds tongues in trees, books in the running brooks,  
Sermons in stones, and good in every thing."

### THE TIDES.

**T**IDES are the regular rising and falling of the waters of the ocean. They occur about every twelve and a half hours. For six hours the water gradually rises, and flows from east toward the west, entering the mouths of rivers, and driving back the waters toward their source; then it seems to rest for about a quarter of an hour, after which it begins to flow back again, from west to east, and continues for six hours more, and after another pause of about fifteen minutes the sea rises and flows again as before; and thus it continues ebbing and flowing twice every twenty-five hours.

Philosophers account for these regular agitations of the waters of the ocean by the influences of the sun and moon, but chiefly of the moon. The common theory is, that the moon, by her attraction, draws or raises the water toward her, and that, as the power of this attraction diminishes as the distance from her increases, the water on the side of the earth nearest the moon is moved faster toward her than the solid body of the earth, consequently rises on that side, and, as the body of the earth is attracted more than the waters on the opposite side from the moon are, it therefore moves toward the moon, and leaves the waters on the nadir behind, so that they appear to rise as tides at the same time as those on the side next the moon.

Below we give a communication on this subject, which, though not entirely new in its theory, is, nevertheless, worthy of a careful consideration.

*Editor of the Student.*

DEAR SIR—The following theory, based upon a suggestion found in some treatises on astronomy, that the earth and moon mutually revolve around a gravitating point common to both bodies, although not presented as a prominent idea by astronomers, appears to be the only true cause and mode for producing the alternation of high

and low water on opposite sides of the earth at the same time.

The position of this gravitating point is variously estimated at from *forty to eighty* times nearer to the center of the earth than that of the moon, thus giving motion to the earth in a small orbit around the moon, while the moon revolves in a larger circle about the earth.

The side of the earth nearest the moon has strong attraction and little or no centrifugal force, while the opposite side, moving in an orbit of from 6,000 to 10,000 miles in diameter, has great centrifugal force and feeble attraction. The difference of these two forces being balanced at the center of the earth, the water is consequently elongated on both sides—on the side next the moon by attraction, and on the opposite side by centrifugal force; thus creating a tidal wave, which is constant and perpetual at a given stationary distance behind the moon's meridian, and inside of which wave the earth revolves, as in a shell.

Should this view be of sufficient interest to your readers, it will be elucidated hereafter more in detail.

Yours truly,

GEO. H. STEBBINS.

Brooklyn, N. Y.

### ORIGIN OF THE DIVISION OF TIME.

**M**ANY ages must have elapsed after the creation of the world before any method of computing time, or of dating events, was brought into established use. At a very early period time was measured by the revolutions of the moon, the seasons, and the successive returns of labor and rest; but as late as the age of Homer a formal calendar seems to have been unknown as a guide to history or a register of events.

The division of days into weeks is the most ancient mode of marking time, and

probably took place at the Creation. The next division was that of months, which appears to have been in use even before the Flood. The months were marked by the revolutions of the moon, consequently were lunar months.

The highest natural division of time is into years. At first a year consisted of only *twelve* lunar months. It is supposed that this method of reckoning was in use as early as the Deluge, and that it continued for many ages after. But this was a very imperfect mode of computing time, for a lunar year was nearly *eleven* days shorter than a solar year; hence the months could not long correspond with the seasons. And even in the short space of *seventeen years* the winter months would have changed places with those of summer.

The calendar which is now generally adopted in the Christian world was instituted by Romulus. His year began on the 1st of March, and contained only *ten* months, or about 304 days, hence was very imperfect. Numa gave the year 355 days, added two more months, and transferred the beginning of the year to the 1st of January. But this was still making the year too short.

When Julius Cæsar obtained the sovereignty of Rome, he found the months had changed from the seasons, and in order to bring them forward to their places he formed one long year of fifteen months, or 445 days. This has been called the year of confusion. It ended January 1st, forty-five years before Christ. From this period the Julian year of 365 days and 6 hours commenced. The common year contained only 365 days, but once every four years the 6 hours amounted to another day, and this day was added to the 23d of February, or the sixth calends of March, which was to be reckoned twice; hence this year was styled Bissextile, or Leap Year.

The Julian year, however, was still imperfect, for the earth performs its annual circuit round the sun in 365 days, 5 hours, 48 minutes, 45½ seconds; hence the solar year was shorter than the Julian, or civil year, by 11 minutes, 14½ seconds, which in 130 years amounted to a day.

In the course of time this inconvenience becoming too considerable to be unnoticed,

Pope Gregory XIII. substituted a new calendar, called the Gregorian Calendar, or New Style. It was published in March, A.D. 1582. Ten days had now been gained by the old mode of reckoning, and these were stricken out of the month of October following, by reckoning the *fifth* day of that month the *fifteenth*.

And in order to prevent the recurrence of a similar variation in time to come, he ordained that one day should be added to every fourth year as before, and that from the year 1600 every fourth centennial year should be reckoned as leap year, and the other three centennial years as common ones. Thus the years 1700, 1800, 1900, 2100, 2200, etc., are to be reckoned as common ones, and 1600, 2000, 2400, etc., as leap years. Even this correction is not absolutely exact, yet the error is so small as to hardly vary one day in a thousand years.

The mode of computing time as established by Gregory is called New Style, and that by Julius Cæsar, Old Style. The New Style was adopted by Spain, Portugal, and part of Italy on the same day as at Rome, and in France on the *tenth* of December following, which was reckoned the *twentieth* day.

But in Great Britain this change was not adopted until September, 1752, when 170 years had elapsed since the Gregorian alteration, consequently a little more than another day had been gained. It was therefore enacted by parliament that *eleven* days, instead of *ten*, should be stricken out of the month of September, 1752. On the second day of that month the Old Style ceased, and the *third* day was reckoned the *fourteenth*. By the same act Great Britain changed the beginning of the year from the 25th of March to the 1st of January. These changes were adopted in this country about the same time.

The time for commencing the year has usually been determined, among different nations, by the date of some memorable event, such as the Deluge, the Incarnation of Christ, etc. The Egyptians began the year with the autumnal equinox. The Jewish ecclesiastic year began in the spring, but in civil affairs they retained the epoch of the Egyptians. The ancient Swedish

year began about the time of the winter solstice. The Turks and Arabs commence their year about the middle of July.

When Romulus began the year in March he named the last four months according to their position. The names September, October, November, December, designated their order—seventh, eighth, ninth, and tenth. But Numa changed the beginning of the year to the first of January without altering the names of the months; hence they do not now correspond to their order in the calendar.

Owing to these changes in the modes of reckoning time, if we wish to ascertain to what date in Old Style a certain day in New Style would correspond, or what date in New Style any day of Old Style would represent, we must observe the following rules:

If the event happened before the 1st of March, 1700, add *ten* days to the Old Style, and you have it corrected for the new; if it happened between the last day of February, 1700, and the first of March, 1800, add *eleven* days; if between the same dates in 1800 and 1900, add *twelve* days; and if between 1900 and 2100 add *thirteen* days. If you wish to ascertain the Old Style from the New, subtract from the New instead of adding to the Old.

The Pilgrims landed at Plymouth, December 11 (O. S.), 1620. This was prior to March, 1700, hence we must add but *ten* days to the 11th day of December; this would make the landing on the 21st of December (N. S.), instead of the 22d, as is commonly but erroneously stated. John Adams was born October 19, 1735 (O. S.). This was after the 1st of March, 1700; hence we must add *eleven* days to the 19th day of October, which would make his birthday fall on the 30th day of October, New Style.

[*Rom'u-lus*, the founder of Rome, and also its first king. *Nu'ma*, the second king of Rome. *Cal'ends*, among the Romans, the first day of each month. *Sixth Calends of March*, the sixth day before the first of March. *In-car-na-tion*, the act of assuming a body of flesh; the putting on a human body. *Incarnation of Christ*, the birth of Christ. The time of this event is supposed by some to correspond with the 25th day of December, and for this reason it is observed as *Christmas*.]

## General Intelligence.

**MOUNTAINS OF THE MOON.**—About two years ago, the scientific world was surprised by the announcement that Drs. Krapf and Rebman, who had been zealously employed for the Missionary Society in Eastern and Central Africa, had discovered mountains within one degree of the equator, and about two hundred miles distant from the sea, which were covered with perpetual snow. There is much reason to suppose that these are no other than Ptolemy's "Mountains of the Moon."

**THIRD RING TO SATURN.**—The "Boston Traveler" states that a *third ring* around the planet Saturn has recently been discovered by Mr. Bond, the astronomer at the Cambridge Observatory. It is situated within the other two, consequently its distance from the body of the planet must be small.

**NEW USE OF THE TELEGRAPH.**—The telegraph has been used to give notice of approaching storms. For example, the telegraph at Chicago and Toledo notified shipmasters at Cleveland and Buffalo, and also on Lake Ontario, that a northwest storm was approaching. With this information they prepare to encounter it, or remain in port till it has passed.

A hurricane storm is said to traverse the atmosphere at the rate of about sixty miles an hour. Hence a vessel in the port of New York, about to sail for New Orleans, may be telegraphed, twenty-four hours in advance, that a southwest storm is advancing on the coast, from the Gulf of Mexico. We are only on the threshold of the real advantages to be derived from the electro-telegraph.

**DEATH OF HON. SAMUEL YOUNG.**—Samuel Young died of apoplexy at his house at Ballston, Saratoga County, N. Y., on the night of the 3d of November last. He was about seventy-two years of age, and had spent much time in the services of his state. He was secretary of state, and superintendent of common schools for the State of New York for three years, and during this period he did much for educational improvement, of which cause he was a warm and faithful friend.

**POPULATION OF TOWNS IN NEW JERSEY.**—According to the late census the number of inhabitants in several cities and towns of New Jersey is as follows, viz.: Newark, 88,882; Paterson, 11,220; Trenton, 10,766.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### "ONLY ONCE."

BY MISS ELIZA A. CHASE.

ONE evening, toward the last of December, the family of Dr. Walton sat in their pleasant parlor, conversing on the anticipated pleasures of the coming holiday. A ride was suggested by one, a party by another, and but one dissenting voice was heard.

"Father," said Henry, "I wish you would let me go with William Miles and the other boys to the Long Pond to skate."

"And pray, who may the other boys be?" asked his father, laughing.

"Why, father, Charles Ellis, Myron Adams, Philip Hall, and the rest."

"Philip Hall is not very good company, and I fear 'the rest,' with the exception of Charles and Myron, are of the same class. I am willing to gratify you, but I do not wish you to associate with bad boys."

"But let me go, father, only once," pleaded Henry. "We shall have such a fine time, and I shall be so disappointed if I do not go."

Dr. Walton had one weak point of character. He was one of those indolent, ease-loving persons so often to be met, and being very indulgent with his children, he frequently yielded his better judgment to their solicitations. Henry knew his father's failing, and with the requisite amount of coaxing obtained, as usual, the wished-for consent.

New Year's day came, and Henry set off to enjoy his expected pleasures. A large number of boys were assembled, the majority of whom were of

that class who, if not really bad boys, were not very profitable companions. Henry heard their conversation with surprise, and as an oath or a rude jest mingled with their discourse his cheek reddened with indignation; but ere long the same expressions fell less jarringly on his ear.

At noon refreshments were brought, and the boys, with a keen appetite, prepared to partake. "Let us say grace," said Philip Hall; and he mockingly commenced. "O don't, Philip!" exclaimed Henry, now really shocked, while a loud and jeering laugh followed his interposition.

To the infinite surprise of Henry, Charles Ellis, and several others, a bottle of liquor was produced; but they positively refused to taste a drop, and their example was followed by nearly all the boys.

Night came, and though no accident had happened to interrupt their pleasure, yet Henry felt there was something unpleasant associated with the remembrance of that day.

"Well, my son," said his father, when he returned, "how have you spent the day?"

"Oh, father," replied Henry, "we have had such glorious sport on the ice and down the hill. I wish you had been there to see us."

"Then you have been really happy?"

"Why, father, there were some things—" and Henry hesitated a moment, and then added, "you know you said some of the boys were not very

good company, but I kept with Edgar Fergey and Charles Ellis."

"Well, I am glad you have spent the day so pleasantly," returned his father. But Henry felt far from being satisfied, especially when his sister Adaline told him of their beautiful ride, and their visit to a friend, whose greenhouse was filled with rare plants in blossom and beautiful clusters of ripe fruit.

Time passed, and Henry having once associated with those whom he should have avoided, found it easy to meet them again. It needed some earnest pleading and the constant promise, "Only once, father; only this time," to overcome the reluctance of the well-meaning but weak parent. At times he remonstrated, but Henry urged so earnestly and seemed so unhappy, that the promise of returning early or of keeping with Charles Ellis at length conquered the wavering resolution of his father.

Henry was guilty of deception here. Knowing his father's confidence in Charles Ellis, he carefully concealed the fact that this noble-hearted boy soon became disgusted with the company of Philip Hall and his set, and had left them long before, after endeavoring to persuade Myron Adams and Henry to do the same.

To avoid the difficulty of persuading his father, Henry would sometimes steal away from home, and join his comrades, whose oaths were now quite familiar, and whose slang expressions he could unblushingly use.

The father's yielding disposition was accurately reflected in the son, and Henry Walton was the creature of circumstances. A little energy in his parent would have corrected his tendency to evil, but left to himself he was in a fair way to verify the words of the poet—

"Vice is a monster of so hideous mien,  
That to be hated needs but to be seen;  
Yet seen too oft, familiar to the face,  
We first endure, then pity, then embrace."

It was a beautiful thought of the fable-loving ancients, that each person has a guardian angel that attends him through life, deserting him not, even in danger and in evil, but guiding and supporting him to the end of his life. Such a guardian had Henry Walton in the person of his sister.

Adaline Walton was some three years older than her brother, and was very different from him in character. For a long time she had seen with intense pain the course which her brother was pursuing, and as another winter came with its long and momentous evenings, and Henry still joined his wild companions, she resolved to rescue him before it was too late. Her parents were now on a visit to Boston, and her brother, released from the nominal control of his father, plunged into dissipation more than ever.

"Henry," said she, one evening after tea, "I am very busy this evening, and I wish you would read to me from this book, with which I am so enraptured." Henry seated himself, and commenced reading Headley's Letters, but in a short time he laid down the book, saying, "I can not stay longer, Adaline—I have an engagement."

Adaline laid her hand tenderly on her brother's shoulder, and said, "Do, dear brother, stay at home to-night; I am very lonely without you. Oh, my brother, could a love as deep and pure as ever sister felt win you back to your home joys, mine should be that love."

Henry's lip quivered, and a tear came in his eye, but repressing his feelings he returned, "But I promised to go, sister; you would not have me break my word."

"Oh, no, Henry, if your word was pledged with good intentions, and in the performance of duty. I would not chide you, brother, but I fear it is for no good you would leave me alone to—

night. But you shall judge if the love you feel for your associates is greater and purer than that you bear your sister."

Henry leaned his head upon his hand, in evident deliberation. His sister had often plead with him before, but this time there was something so kind and touching in her manner it overcame his resolution, and raising his head at length, he said, "I will stay, Adaline."

How many times in after life did Henry Walton bless his sister for that evening. The party with whom he was to meet called for a supper at one of the hotels, and in payment passed counterfeit money. The following day they were arrested and sent to jail, and at their trial Philip Hall and three others were sentenced to the state prison, and the rest, though acquitted, bore the ignominy of a felon's companion.

Henry, more thoroughly aroused to a sense of his danger, reformed, and never after did he give way to the temptation of vicious company. "*Only once*" associating with evil had almost proved his ruin, and yielding to the persuasions of his sister "*only once*" had saved him from disgrace.

### THREE POETS IN A PUZZLE.

**O**n leading the horse to the stable, a fresh perplexity arose. I removed the harness without difficulty, but, after many strenuous attempts, I could not remove the collar. In despair, I called for assistance, when aid soon drew near.

Mr. Wordsworth brought his ingenuity into exercise, but, after several efforts, he relinquished the achievement as a thing altogether impracticable.

Mr. Coleridge now tried his hand, but showed no more grooming skill than his predecessors; for after twisting the poor horse's neck almost to

strangulation, and the great danger of his eyes, he gave up the useless task, pronouncing that the horse's head must have swollen since the collar was put on; "for," he said, "it was downright impossibility for such a huge head to pass through so narrow a collar!"

Just at this instant a servant girl came near, and understanding the cause of our consternation, she said, "La, master, you don't go about the work in the right way. You should do like this;" when, turning the collar completely upside down, she slipped it off in a moment, to our great humiliation and wonderment. On seeing this, each of us was satisfied that there were heights of knowledge in the world to which we had not yet attained.—*Cottle's Life of Coleridge.*

### LITTLE CHILDREN LOVE ONE ANOTHER.

A **LITTLE** girl with a happy look,  
Sat slowly reading a ponderous book,  
All bound with velvet and edged with gold;  
And its weight was more than the child could hold:

Yet dearly she loved to ponder it o'er,  
And every day she prized it more;  
For it said—and she looked at her smiling mother,  
It said, "Little children love one another."

She thought it was beautiful in the book,  
And the lesson home to her heart she took.  
She walked on her way with a trusting grace,  
And a dove-like look in her meek young face,  
Which said, just as plain as words could say,  
The Holy Bible I must obey;  
So, mamma, I'll be kind to my darling brother,  
For "Little children must love each other"

I'm sorry he's naughty, and will not play,  
But I'll love him still, for I think the way  
To make him gentle and kind to me,  
Will be better shown, if I let him see  
I strive to do what I think is right,  
And thus when we kneel in prayer to-night,  
I will clasp my arms around my brother,  
And say, "Little children love one another."



The little girl did as her Bible taught,  
 And pleasant indeed was the change it wrought;  
 For the boy looked up in glad surprise,  
 To meet the light of her loving eyes;  
 His heart was full—he could not speak—  
 But he pressed a kiss on his sister's cheek;  
 And God looked down on the happy mother,  
 Whose "Little children loved each other."

*Selected.*

### POLITENESS IN CHILDREN.

**H**ow few children think it worth while to be polite to their playmates and intimate friends! By politeness I do not mean a great deal of unnecessary bowing and courtesying, but that delicate attention to the comfort of those around us that springs from a kind, generous heart.

How many children enter a room without noticing, respectfully, those who are older than themselves. I have seen them come in on a cold winter day, and draw their chairs before the fire in such a way that those who were sitting back could scarcely feel the warmth of it, and this without any apology for such a breach of politeness.

Sometimes they interrupt those in the room when they are engaged in conversation, by asking some foolish question, instead of waiting, as they should do, until an opportunity is given them to speak. Then they are impolite to their playmates, and to their sisters and brothers. Instead of cheerfully assisting when their help is needed, they leave them to help themselves.

Some boys think it beneath them to be polite to a sister. I feel sad when I see such a boy. But there are many who think differently. I recollect that I used to meet a fine, manly lad last winter, drawing his little sister to school on a sled. Her rosy cheeks and sparkling eyes bore testimony that his politeness was not thrown away upon her. She would pat his cheek with her hand, and call him her kind brother.

He would frequently meet boys of his acquaintance who would urge him to leave his sister, and go with them to play. He would answer them, "Yes, when I have taken little Emma to school." I never saw him impatient when he was walking with his little sister because she could not keep up with him; and he never would run away and leave her. Do you not think that boy was a good brother, and a good son?

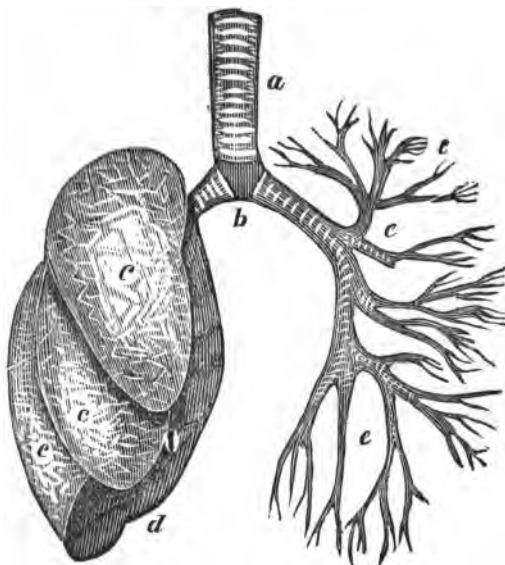
He was always kind and polite to his sister, and to all. Do you think he will forget to be polite as he grows older? No, for it will become a habit with him; and these little attentions, which cost him nothing, and are so gratifying to those who receive them, will gain him many a friend.

Think of this, my young friends, when you are tempted to be rude and selfish, or unkind to those about you; think how many friends your little kind act may gain you, and how happy it will make those who receive your kindness; and remember that you lose nothing by being polite.

Be polite at home. Be polite toward your parents, and your brothers and sisters. This is the true place to cultivate good manners. It is worth more than all the "schools for manners" that have ever been established. When you retire to sleep, bid your parents, your brothers and sisters, and all, a kind "good night." And when you meet them again the next day, greet them with a pleasant "good morning."

If any one does a favor for you, thank them for it. When you are helped at the table thank those who help you. When you wish any thing handed to you, do not say, "Give me some —," or "Hand me the —," but ask pleasantly and respectfully, "Will you please to give me some —?" or, "Please to hand me the —." It is these little things that make persons polite.

## PHYSIOLOGY—NO. III.



## THE LUNGS,\* AND RESPIRATION.

BY T. ANTIBELL, M.D.

**M**AN has a necessity for the atmosphere around him; without it he can not exist. The power of locomotion is given to enable him to change his atmosphere at will. This power does not belong to man alone; it is the necessity of all animated beings, from the smallest insect to the monsters of creation. Whence this necessity?

It arises out of the process of digestion. To this we shall hereafter recur; but at present we may briefly say that when food is taken a large amount of an element called *carbon* is received into the system. There is always contained in food more of this element than is required for the wants of the body, and the surplus has therefore to be gotten rid of, and the process of breathing, or *respiration*, is one important means to attain the desired end.

Respiration is an aeration of the system. By it the external air is introduced into the body, and brought

into contact with its extremest parts. And throughout the animal kingdom there are distinct organs for performing this important office.

Among the family of fishes this is accomplished by a thin membrane, prolonged into tufts, or fringes, so arranged as to expose the greatest amount of surface to the water, each filament containing two vessels, one for the ingress and the other for the egress of the water.

It is while the water is passing through this membrane that it is robbed of its pure air, which is received into the blood-vessels spread along these fringes, or *gills*.

Fishes respire externally. Not so with land animals; their breathing is internal, and is carried on by passages and chambers, into which the air is

\* The above cut represents a view of the parts of the lungs: *a*, the windpipe, or trachea; *b*, its division into two tubes—bronchial tubes, each of which divides and subdivides into smaller tubes, marked *a*, *a*, *c*; *c*, *c*, *c*, represents the right lung, with its three lobes, and all bound together and invested by pleura.

drawn, and on the sides of which the blood is distributed in a minute network of vessels, called *capillaries*, from their size.

In the leech and the earth-worm aeration is carried on by a series of little air-cells, disposed along each side of the body, one for each segment. In insects, instead of these sacs, there is a system of prolonged tubes ramifying through the body, and carrying air into its minutest portions.

The oyster respires by gills, like the fish, but, unlike it, the gills have no connection with the mouth. In frogs and reptiles the lungs are simple sacs, with little subdivisions into cells, a small amount of aeration sufficing for them.

In birds a large surface is provided for aeration, by subdividing the lung into minute cells, and also by the addition of air-bags, placed in various parts of the body, and even in the center of the long bones. Thus a large air-surface is given in a little space, and the body rendered proportionably light.

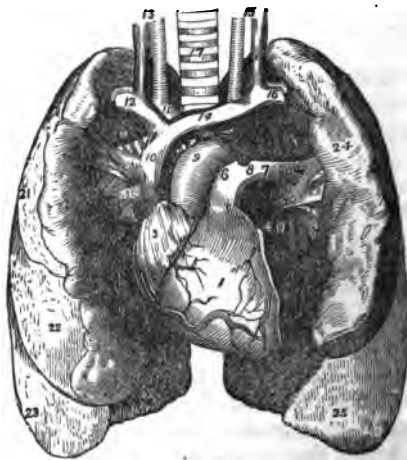
In no class of animals, however, is the minute subdivision into cells, and the mechanism by which a continual supply of air is provided, so perfect as in the mammals, at the head of which man is placed.

Respiration is carried on by man in the upper parts of the chest, on the cavity of which are placed the lungs—a pair of sponge-like bodies made up of a cluster of minute cells, which have the power of dilating or contracting, and on the sides of which the minute capillary blood-vessels are distributed.

These cells open into a narrow tube, which widens as it passes upward, receiving additional tubes from the same lung. The main tube passing still higher up, unites with the one from the lung on the opposite side, forming a wide air-tube, called the trachea, or windpipe, which, passing into the neck, terminates in the mouth.

The cells and tubes are bound together by a thin cellular membrane, and covered on the outside by a smooth, polished, lining-membrane (the pleura), which, after investing these organs, lines the inside of the ribs, and allows the lungs to move freely in the space allotted to them.

The air-cells are too small to be delineated; they vary in size from one twentieth to a two hundredth part of an inch in diameter, and therefore are so numerous in a single lung, thereby exposing so large a surface of membrane to air, that it has been calculated to exceed twenty thousand square inches in an average-sized man.



VIEW OF THE HEART AND LUNGS.\*

This engraving represents both lungs in their natural positions, and the relation which the heart and great vessels bear to them, being placed in front of them. The left lung is smaller but longer than the right, and is made up of two lobes, or masses, while the right

\* 1, the heart; 3, the right auricle; 4, the left auricle. The office of the auricles is to receive the blood from the veins, and communicate it to the ventricles, or parts of the heart. 5, 6, 7, the pulmonary artery—it conveys the impure blood of the veins to the lungs; 9, the aorta—it conveys the pure blood from the heart to the arteries; 10, the superior vena cava; 17, the trachea; 18, the right bronchus; 19, the left bronchus; 20, 20, the pulmonary vein; 21, the superior lobe of the right lung; 22, its middle lobe; 23, its interior lobe; 24, the superior lobe of the left lung; 25, its inferior lobe.

has three. The smallness of the left lung allows the heart to be placed upon that side of the chest.

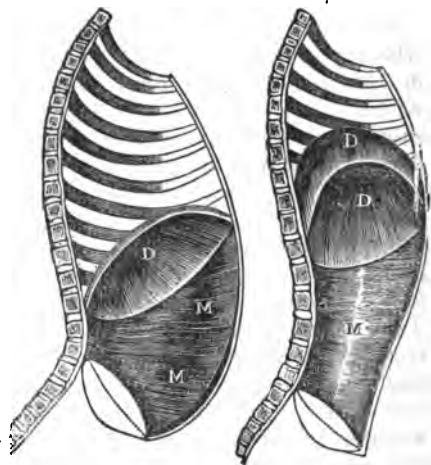
The windpipe may be seen passing down the center, behind the blood-vessels, when it divides into the bronchial tubes, which pass into the lung, on each side. At this spot, arteries, veins, and nerves also enter each lung. These are needful to nourish it, and give it the requisite nervous stimulus, without which respiration could not be carried on.

Breathing consists of two acts: the first, that of drawing in the external air—inspiration; the second, that of driving out an equal volume of air—expiration. To inspire, the bony chest has to be dilated. This is accomplished by the muscles of the chest and back, with those attached to the shoulder, which co-operate together, and by contracting, raise and pull out the ribs, thereby enlarging the cavity of the chest. The muscles between the ribs (intercostal) assist in this action very materially.

The lungs, in the healthy state, completely fill the cavities assigned to them; so that when this cavity is enlarged a vacuum is produced, which can only be filled by a corresponding enlargement of the lung; and to accomplish this the air rushes down the trachea, and passes to the remotest air-cells.

The lung thus obtains a large space for dilation, by the elevation of the ribs; but it is further increased by the action of the diaphragm, or midriff—a muscle which is spread across, inside, and below the lungs, separating them from the contents of the abdomen. This muscle, when not in action, is arched upward into the chest, diminishing the space there, but when it contracts it becomes flatter, pressing down into the abdomen, and affording greater space for the lungs. We become unpleasantly conscious of

the existence of this muscle whenever it contracts spasmodically, as in hiccups.



SECTIONS OF THE CHEST AND ABDOMEN.\*

When the lungs are thus filled to the utmost with air, those muscles cease to contract any more, their fibers relax, and the bony chest sinks down to its original dimensions, the dilated lungs are pressed upon, and the excess of air is expelled out by the windpipe. This constitutes expiration. It is almost a passive act, being little else than the cessation of the muscular action which produced inspiration. In both acts the lungs have been quite passive, they being filled or emptied, not by any act of their own, but solely by the amount of the dilation and contraction of the walls of the chest.

These motions of the chest are continually going on, and in general it may be stated that from fourteen to eighteen respirations occur in the minute, and every fourth or fifth inspiration is drawn deeper than the others. In young and nervous persons these acts are more quickly performed, as

\* D, D, the diaphragm; M, M, muscles of the abdomen. In the first view, the diaphragm appears as in its relaxed condition; in the second, as in its contracted state. When the air is drawn into the lungs, the chest expanding at the same time, the diaphragm descends. When the air is forced outward the diaphragm ascends.

are they also in inflammation of the lung; while in fever, and a few other conditions of the body, its movements become remarkably slow.

Having now described the parts which perform the office of drawing in the air, and the mechanism by which it is performed, it remains to be shown what are the alterations produced in that fluid, and the effects upon the frame dependent on the alteration.

Each inspiration draws in about twenty cubic inches of air; the same bulk is expired immediately after. This is equal to 266½ cubic feet in twenty-four hours; and as a man ought not to breathe the same air twice, it is evident what a large amount of fresh air every one requires to be surrounded with.

The pure air which is inspired is made up, in round numbers, of 79 parts of nitrogen and 21 of oxygen. The air which is expired has not this composition, but is very nearly 79 parts of nitrogen and 20 parts carbonic acid, the rest being a little air unaltered.

The change produced in the air in the lungs is the apparent loss of the oxygen, and its being replaced by carbonic acid. But as carbonic acid itself is made of *one* part of carbon and *two* parts of oxygen, it is clear that this latter is not wholly lost, but only that portion which is replaced by carbon, or about one third of the whole quantity of oxygen present in the air. The remainder, however, by being united with carbon, is rendered unfit for further use.

To the lungs, then, oxygen is taken in, and a nearly equal amount of carbonic acid is given off, the latter being the most appropriate form in which carbon could be thrown off the lungs.

Carbonic acid is that air which escapes in fermentation, which flies off

from soda water, and which may be had in abundance when an acid is poured on marble. It puts out a light, and if a man attempt to breathe it in quantity he is suffocated. It may be breathed when diluted, but it then poisons the system, and lowers the general health. In any case it is obnoxious. The death produced by descending vats and closed cellars is caused by this gas.

A healthy man expires daily nearly 18,000 cubic inches of this deadly gas, which for himself or others to breathe again, even in a diluted form, is injurious. From this, with the foregoing calculation, it appears necessary that each individual, for healthy existence, should have the expired air containing this large quantity of carbonic acid completely removed from reach of breathing; and should also be supplied with 266 cubic feet of fresh air in the same time.

We are here led to perceive the high importance of ventilation; for it is not sufficient for health that a room should contain the quantity of air requisite for the support of its inhabitants during a given time. After they have remained in it but a part of that time, the quantity of carbonic acid which its air will contain will be large enough to interfere greatly with the due aeration of their blood, and thus cause oppression of the brain, and other morbid affections that arise from an accumulation of carbonic acid in the circulation.

It might be asked, Does any church, school, or public room supply those requisites? Hardly one.

Another requisite necessary for healthy respiration is a roomy chest, a capacity sufficient to admit the necessary quantity of air into the lungs. The laboring man, and he who exercises the muscles of his chest, possesses this requisite; not so the sedentary citizen, or the woman who, copying a

fancied ideal of beauty, compresses her chest between the bones of stays.

She not only prevents its attaining its healthy size, by pressure, but hinders the muscles from contracting, and thus suffers them to dwindle away, and the result is she can not take a full breath, for the ribs can not be raised except the muscles contract strongly, and this can not be accomplished by weak atrophical muscular fibers.

The engraving (see page 83) illustrates this by showing a healthy chest, and one unable to be fully expanded. The blood can not be aerated in this narrow chest, hence the body can not be properly nourished, and the individual can not enjoy permanent health.

[*Aer-ation*, the process of purifying or arterializing the blood by respiration, which is performed by the lungs. *Segment*, a part. *Ram-i-fy-ing*, dividing into branches. *Cellular membrane* is composed of an indefinite number of cells, or sacs, communicating with each other. It seems to be a medium of connection between all parts of the body. The cells serve as reservoirs of fat. *In-ter-cost'al*, lying between the ribs.]

### LEARNING TO WORK.

**P**oor and helpless will that woman be, who does not learn, when a girl, to employ her hands in useful labor. She may have enough, but she will not know how to use it for the comfort of her family.

She may be well educated, and able to converse interestingly. She may play well on the piano. And all this is well. But if she does not understand *work*, her common, every-day duties can not be well done; and these are what, in all circumstances, contribute most to the comfort of every-day life.—*Selected*.

GET justly, use soberly, distribute cheerfully, and live contentedly.

### QUERIES.

UNDER this head we propose giving a series of questions, pertaining to mathematics, grammar, philosophy, and history, which we wish answered by students, teachers, and others. Our aim in doing this will be to awaken thought, encourage a critical investigation, and to aid in fixing principles of science in the mind. For this purpose we invite teachers and all interested to send us queries and answers. The answers will usually be given in the next number after the one containing the questions. In case several solutions of a problem are sent us, we should only give one or two, and those such as we consider the best.

Two companions having a parcel of guineas, says A to B, If you will give me one of your guineas, I shall have as many as you have left. Nay, replies B, if you will give me one of your guineas, I shall have twice as many as you will have left. How many guineas had each?

A father gave thirty-four eighty-thirds (34-83ds) of his estate to one of his sons, and 34-83ds of the remainder to another, and the surplus to his widow. The difference in the children's legacies was found to be \$771 50. How much money was left to the widow, and how much to each son?

If  $\frac{1}{2}$  of 8 is 4,  
What is  $\frac{1}{2}$  of 20 score?

When and by whom was Rome founded? How many kings reigned successively over it before the birth of Christ? Who were they?

### ANSWERS TO QUERIES.

Such questions as require only a statement of simple laws and established rules, or a criticism, we shall often answer ourselves instead of publishing them, especially when the queries are included in a general principle or rule, as the following:

After *numerals*, the words *pair*, *couple*, *dozen*, *score*, *hundred*, *thousand*, etc., should not be used in the plural form. Examples: *Six pair* of shoes; *four dozen* of eggs; *ten sail* of vessels; *fifty head* of cattle.

Smoke goes up a chimney because the air in the chimney rises and carries it up. The air rises because it has been warmed, or heated, and thus becomes lighter than the surrounding air. This is by the same principle that a piece of cork placed in a basin of water rises to the top.

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### LEARNING TO ADD.

MARY, I wish I could learn to add, as John does," said lit-tle Ed-ward, to his sis-ter, one e-ven-ing as they sat a-round a warm fire.

"Well, Ed-ward, I will try to teach you," said Ma-ry.

"O thank you, sis-ter, I shall be so glad to learn. May I get my slate and be-gin now?"

"O no, Ed-ward; you can not use a slate yet; bring me the cents you have been sav-ing to buy a new book, and I will teach you with them."

"What, Ma-ry! teach me to add with cents? I nev-er heard of such a way."

"That may be, but make haste and bring them to me, and you shall soon find that it is not so strange, aft-er all."

"Here they are, Ma-ry; now I want to see what fun-ny way you have to teach one how to add."

"Well, you shall soon see. How ma-ny can you count, Ed-ward?"

"I can count one hund-red."

"Well, now tell me how ma-ny cents you have here"

"I have fif-teen."

"Here is one, Ed-ward, and

there is one more; now, how ma-ny do one and one make?"

"One and one make two."

"Very well. Here is one cent, and I now put two more with it; how ma-ny are there now?"

"There are three."

"Right. Here are two cents, and now I put two more with them; how ma-ny are there?"

"Four. Oh, that is very eas-y."

"Well, now tell me how ma-ny one and one make?"

"One and one make two."

"How ma-ny do one and two make?"

"One and two make three."

"How ma-ny do two and two make?"

"Two and two make four. Is this add-ing, Mary?"

"Yes, Ed-ward, and I am glad to see you learn so well.

"Now, if you have three cents in one hand, and two cents in the oth-er hand, how ma-ny cents will you have in both hands?"

"I should have five."

"How do you know that is right?"

"Be-cause, if I count the three

cents in one hand, and then count the two cents in the other hand, I find that there are five in all."

"Very well. Now tell me how many three and three make."

"Three and three make six."

"Right. If you hold four cents in one hand, and two in the other, how many will you hold in both?"

"I should hold six in both."

"Then how many are four and two?"

"Four and two are six."

"Now, if you buy an apple for one cent, and an orange for three cents, how many cents will you give for both?"

"I should give four cents for both, because one cent and three cents make four cents."

"Well done. Now this is learning to add. But I have no more time to spare now. In a few days I will teach you how to make figures, then I can show you how to add on the slate, as John does."

## AUNT ELIZA'S STORIES,—No. IX.

### THE SAILOR BOY.

**M**OTHER, do tell us a story," said little Mary Newly, one evening to her mother.

"O yes, tell us a nice story, that's a good mother," said her brother Charlie.

"Well, my dears, what shall it be about?" asked their mother.

"Oh, a little girl and her lamb," said Mary. "No, no, mother; let it be sailors or soldiers," said Charlie. "Who wants to hear about lambs; they are such common things."

"I think Charlie is a little selfish," replied his mother. "Mary likes to hear of lambs as well as her brother does of sailors. But I know a story that tells of both."

"Tell us that, mother," said Charlie, "tell us that and we shall both be pleased."

"Well, sit down, then, and be very quiet while I am telling you."

"In the town of Weston lived a poor widow by the name of Russell. She had two children, Jane and William, and very good children they were too."

"There was a school near by, which they attended, for they loved very much to learn. Some kind persons gave them books and clothes, for they were so very poor I do not think they could have gone to school without help from some one."

"Little Jane was a great favorite with the teacher and



scholars, for she was one of the sweetest little things in the world. You never saw her look cross, or act bad in any way, and the girls called her, 'Gentle Jane.'

"As soon as Jane was old enough to work and earn money, she had to stay at home, for her mother was growing feeble, and could not work as hard as she used to do; but Jane found time every day to read and write a little.

"When William was fourteen years of age he went on board a ship as a sailor boy."

"Hurrah!" said Charlie, "here comes the sailor part. Oh, you are a good mother."

"Ah, yes, Charlie, but the lamb part will come pretty soon, I guess," said Mary.

Mrs. Newly smiled, and went on. "You may be sure his mother and sister were very sad at parting with him, but they knew it was for the best.

"Jane soon found a good place where she could work all day, and come home at night to stay with her mother. Mrs. Fenton was very kind to her, for she was so good to the children, and kept them so quiet, and she made her many little presents.

"One day some of the men came into the house with a little

lamb that was almost dead. Jane warmed it, and soon it began to move a little; then she fed it with milk, and in a short time it revived.

"The lamb became very fond of Jane, and at night, when she started for home, it would follow her to the gate, and bleat sadly when it could go no farther.

"At length Mrs. Fenton gave the lamb to Jane, and there was not a happier girl in the town than she was.

"See, mother, see, Violet is mine," she exclaimed, as she entered the door of her home, and danced around the room in delight. Violet capered about too, as merrily as she.

"After a time the kind Mrs. Fenton removed to a great distance. She wanted to take Jane with her, but Mrs. Russell's health was very poor, and the good girl would not leave her sick mother.

"It was a hard time for Jane, you may be sure, and though people were very kind to her and her mother, it was as much as she could do to procure food and clothing for them during the winter.

"Jane's lamb was now quite a large sheep, and still she loved it as well as ever. One day a man was passing, and as he saw

Violet, he asked Jane if she would sell her sheep. But Jane could not think of such a thing. The man offered her two dollars for it, but she refused, and he went away.

"Soon Mrs. Russell grew worse, and Jane often wanted money to get something for her sick mother. Then she thought of the two dollars, and almost wished she had sold her lamb.

"The neighbors were so kind to her she could not ask them for money, and as she saw her poor suffering mother, she thought that she was doing wrong in keeping the lamb.

"So she went to Mr. Sayles, and told him he could have her lamb, but the tears came in her eyes as she spoke.

"Mr. Sayles came for the lamb, and as he put the money in her hand, she thanked him, and turned her head, for she could not bear to see her pet go away.

"And when she looked at her money she found she had three dollars instead of two.

"Spring came, and Mrs. Russell, though better, was still quite feeble. William had now been gone two years, and they had heard from him but once. Oh, how his mother and sister wished to see him, and how they

wondered what had become of their dear William.

"One evening some one knocked at the door, and as Jane opened it there stood a young man with one arm taken off.

"He begged for a little money and some bread, for he could not work. He had been hurt by the bursting of a gun on board a vessel.

"Oh, how Jane's heart beat, for she thought of her brother. She gave him something, and he went away, but this made her and her mother think more of their sailor boy.

"About the middle of summer Mrs. Russell was sitting by the window in an easy chair, and Jane was in the garden, when a ruddy young man entered the door very softly, and stopped by Mrs. Russell's chair.

"She was asleep, but as he bent over her, and pressed his lips to her cheek, saying, 'Mother, dear mother,' she awoke and beheld her own dear William.

"There was a joyful time in the old cottage, and Mrs. Russell soon became well, for she said the sight of her boy was better for her than all the medicine.

"William brought money with him, and, by working with diligence, he soon procured a good home for his mother and sister."

"But the lamb, mother, what became of that?" asked Mary.

"When William heard the story of the lamb, he gave Jane money to buy it back, but Mr. Sayles would not sell it.

"'I will give it to you,' said he, and he gave her Violet, and a little lamb too."

### FONDNESS FOR DRESS.

EMMA returned from a visit to her uncle's, vexed and unhappy. Her father perceiving it, invited her to take a walk with him.

On their way they passed the shop of a fashionable dressmaker, when Emma exclaimed, "This is where aunt purchased Maria's new pelisse, father. You can not think what a contrast there was in hers and mine. One looked so *nicely*, and the other so *old fashioned and shabby*, I was ashamed to walk with her."

"I am very sorry for that," said her father. "Yet, if you had not told me, I should not have discovered any thing so mean in your pelisse. However, since wearing it exposes you to so serious a mortification, I will make you a present of a new pelisse, like Maria's, if your mother has no objection."

Emma thanked him heartily, and her good humor returned.

The object of the walk was to visit a little girl, belonging to

the Sabbath School, who had been absent several weeks from sickness.

They found her pale, emaciated, and dejected, on a cold day, sitting by a few dying coals in the grate. She was just recovering from a violent fever.

"Where is your mother, my good girl?" inquired Emma's father.

The little girl told him that her father's wages were insufficient to support the family, and her mother had lost much time in taking care of her. She was gone out to work, to get something for her and six other little children to eat.

By this time, Emma's face was suffused with tears; and as they went out, she entreated her father to send some coals to keep them warm, and some food for them to eat.

But he told her that he could not afford it; for her pelisse would cost as much as they could spare for a long time to come.

"Forgive me, my dear father," she said, "and since vanity can only be gratified by such cruel selfishness as this, I hope I shall never again be ashamed if my clothes are not so expensive or fashionable as Maria's."

Nothing is more foolish than to ape others in dress. If you see some that can dress better than yourself, you may easily find others who can not dress so well. This will cure your vanity.

*Anecdotes for Girls.*

## Phonography.—Lesson 2.

## DIRECTIONS FOR STUDENTS.

By this time you have probably learned to write phonography, and you may be anxious to be able to report, that is, to write, a speech as it is delivered. Here let us give a word of explanation. You have now been learning what is called the "corresponding style," which inserts all of the vowels; in the "reporting style" the vowels are omitted, and only the skeletons of the words are written, or the consonant signs. But in regard to rapidity in writing, the pupil should not be too eager, for his first aim should be to write well, and then rapidity will grow spontaneously with practice.

Says Pitman, on this subject, "If the student allow his anxiety to write fast to overcome his resolution to write well, he will not only delay his attainment of real swiftness, but will always have to lament the illegibility of his writing."

It may not be amiss here to recapitulate some directions given in former lessons, and also to add others. Phonography should be written on ruled paper, with either pen or pencil, but a pen is by far the best, though reporters often write with a pencil. The pen should be held loosely in the hand, like a pencil in drawing, and turned so as to make with ease those marks which incline to the left, as in writing what is termed *back hand*.

Consonant-signs and vowel-signs are written separately, and they must not be joined to or touch each other. The consonant-signs are made first, and the vowels added afterward, whether the vowel-sign comes first or not. Learners are apt to place the vowel and consonant-signs too near each other; it is better that they be too far than too near. Care should be taken to make sufficient distinction between the light and heavy vowel-signs. The dashes used to represent the vowels should be made nearly one fourth the length of the consonant-signs.

The perpendicular and inclined consonant-signs are *all* struck from top to bottom, except *l*, *r*, and sometimes *sh*. The first of these is struck upward from the line when it is the only consonant-sign in the word, when it is the first consonant in a monosyllable, and when it is followed by other consonant-signs; but when it is the last sound heard in a word it is usually struck down, according to the general rule.

The letter *r*, when joined to other consonant-signs, is sometimes struck upward, as a matter of convenience. Then the character is the same as that used for *ch*, with the exception that *ch* is always made downward. The character used for *r* is struck upward when followed by any consonant-sign except *m*, *l*, *r*, *k*, or *g*. The *sh* sign is struck up in only a few words, as *lash*, *shawl*, *shell*, *shall*, *shoal*, *leash*, *shale*, *lush*.

The perpendicular and inclined consonant-signs should not be extended below the line. The inclined signs should not be commenced quite as far above the line as the perpendicular ones, because they would then be much longer than the perpendicular ones when extended down to the line. The five horizontal signs, *m*, *n*, *k*, *g*, and *ng*, are made from left to right.

The consonant-signs should be made about one fifth of an inch in length. The inclined ones should stand at an angle of forty-five degrees from a perpendicular; the curved consonant-signs should include one fourth of a circle.

When a word contains but one consonant-sign, and that a horizontal one, it should be written above the line, even with the top of the perpendicular ones, unless the vowel be a *second* or *third-place* one.

The vowel-signs have a local value, and that value is known from the position which they occupy with regard to the consonant-sign. As was explained in the first lesson, each vowel-sign may have three positions, and these positions are numbered first, second, and third, commencing with the beginning of the consonant-sign, or the place of beginning in making these signs. Hence, if the consonant-sign is struck downward, the first-place vowel must be put at the top of the sign, but if the sign is struck upward it must be placed at the bottom. The middle of the sign is always the position for the second-place vowel-sign. In the horizontal consonant-signs the vowels take their local value from left to the right.

When the vowel *sound* is heard before the consonant *sound*, it must be written before the inclined and perpendicular consonants, that is, on the left of them. But if the vowel *sound* is heard last, it must be written after, or on the right of them. If the consonant-sign is a horizontal one, the vowel-sign must be written *above* it if heard first, and *below* it, if heard last.

## Exchange Department.

### DRAWING IN SCHOOLS.

WHOEVER is acquainted with the great mass of our schools, especially in the country, must be aware that one of their greatest evils is a want of sufficient business for all of the children, especially the youngest. Children must be employed, and if the teacher fail to furnish them with something useful and pleasing to do, they will themselves find employment, though it bring upon them the teacher's rebuke, or even the rod.

The youngest children of the school, especially those who are unable to read, are commonly called up in a class, or separately, once or twice each half day, and spend from five to fifteen minutes at each exercise; and during the remainder of the school hours, which amounts to about *five sixths* of the whole time they are in school during each day, they have little or nothing to do but to obey the frequent commands "Sit still," "Sit up straight," "Fold up your hands." Not unfrequently all books are kept from them, "because they destroy them, and do not learn any thing from them."

Now, a dozen small children thus unemployed must inevitably cause disorder. It is contrary to their natures for them to remain idle. The blood courses rapidly through their veins, their spirits are active and restless, and they are not capable of deriving pleasure from continued study. Hence comes the inquiry, What shall be done with such children? How can we furnish them employment which will not only please them, but from which they may be constantly deriving some good?

Give them slates and pencils, with convenient desks to lay them on, and even if left entirely to themselves it will be far better than if without them. But place before them cards with well-formed letters, words, the elementary geometrical figures, drawings of familiar objects, as of tools, farming and household utensils, animals, etc., and they will teach themselves something of drawing, and more of letters, spelling, reading, and writing. Besides, while thus engaged, they are kept from play and those mischievous tricks so common among small children at school, which are sources of great annoyance to both teachers and older pupils.

If, in addition to this, the teacher would occasionally give the pupils familiar directions in the elements of drawing, by practical and simple lessons on the black-board, and show them also how the Roman letters are formed, and how to begin a drawing of an object—which lines to make first, which next, and so on, step by step—much, very much time would be saved both teachers and pupils, besides the important benefits derived by the children, as they almost spontaneously learn something important in several branches.

In this way should drawing exercise be introduced into every school where there are young children, and as they advance sufficiently let them be furnished with paper and pencils, and allowed to copy, by the use of these, their lessons from the cards. In this manner three fourths of the early years of schooling, which now are wasted in many schools, may be turned to profit.

This plan is not a mere speculation; it has been tested in hundreds of instances, and found to succeed admirably. Our own experience has convinced us of its utility. In a school of eighty pupils, of ages from five to twenty-five, we found the plan to be all that it is here recommended, and the best government for young children to be to keep them furnished with pleasing and profitable employment. Of course the ingenuity of the teacher will at times be taxed for changes, as children tire of too long attention to one thing, but a multitude of changes can be produced even with the use of the slate and pencil.

### NOTICES OF EXCHANGES.

SINCE issuing our last number, we have not received many drawings, but we know that the little hands are still at work. From some schools that we have heard, we learn that packages of drawings are in the process of preparation, and they will be along soon. Children, do not forget the exchanges. We shall make a division of our collection of drawings in a few days, and will endeavor to send some specimens to all who have forwarded any to us.

Drawings have been recently received from the pupils of District School No. 16, Wantage, N. J., P. Mulhern, teacher. Names of pupils who sent us the drawings: Margaret S. Dunning, aged 14; Elmira Lewis, 13; Martha Dunning, 11; Isaac H. Adams, 14; Gabriel

B. Dunning, 10; Lyndon L. Ayres, 10; William H. Cosner, 10; Absalom Dunning, 9. Not so bad, Mr. M. Let us hear from you again.

From pupils attending Public School No. 4, New York: A. Gildersleeve; M. Jennings; Matilda Schmal. The drawings from these pupils are neatly executed; but we want to see drawings from more attending this school. We are sure they can furnish us with a good package for exchanges to be sent to schools in the country.

From the pupils of North Branch Academy, Somerset County, N. J., Mr. John N. Voorhees, principal: Thomas E. Bartow, aged 15; William H. Hagaman, 15. Well done, for a beginning.

### Editor's Table.

#### EVENING FREE SCHOOLS.

IN the city of New York there are thousands of boys and girls who are deprived of an attendance at the day schools, because they are placed at work or at trades, at so early an age. The boys are engaged as apprentices in all the various mechanical trades, also as clerks, waiters, errand boys, etc. The girls are employed in fancy stores, milliners' shops, printing offices, book binderies, cap factories, candy stores, cigar shops, at button making, attending looms, and a multitude of other employments, many of which have scarcely been heard of.

In this manner the children of parents in limited circumstances are employed as soon as they can earn a few shillings a week. Some of them may have attended school for a few terms when quite young; others have never been within a school-room during the hours of instruction. Hence a large number of this class are growing up in ignorance, many of them not knowing how to write their own names, or even to read a simple sentence.

In March, 1848, the legislature of this state passed an act authorizing the Board of Education for the City and County of New York to establish *Evening Free Schools*, for the education of apprentices and others. Such schools have been opened in the buildings occupied for day schools, and they are conducted by those engaged in teaching during the day.

There are now in operation *nineteen* of these evening free schools—thirteen for males and six for females—taught by about eighty-five teachers, and under the supervision of a committee of five persons. These schools usually commence about the 1st of October, and continue in session five evenings each week for seventeen weeks, having, however, a vacation of two weeks during the holidays. The schools

for the females are opened at seven o'clock, and closed at nine; and those for the males open at half-past seven o'clock, and close at half-past nine o'clock.

The branches taught are reading, writing, book-keeping, arithmetic, geography, and grammar. Two hours in each week are devoted to reading, two to writing and book-keeping, three to arithmetic, two to geography, and one to grammar. Usually only two different studies are attended to by the same pupils during one evening.

The number of pupils that entered these schools last winter was 7,638, of ages varying from twelve to fifty, and their attainments were about as varied as their ages. Of this number 1,094 could not read at all; 2,035 could read but very imperfectly the most simple sentences. The remainder had previously received very little instruction, but even to them the lights of knowledge had become nearly obscured, and they would have been left to grope their way through the world in mental darkness but for the establishment of evening free schools.

Over 2,000 of those who entered these schools last winter could not write, and more than 4,000 were unacquainted with the simple rules of arithmetic. But a large number of these became able to write plainly, and obtained a knowledge of the simple rules of arithmetic; some even advanced sufficiently to enable them to work questions in fractions, and also in interest, before the term closed.

It is interesting to visit these schools, and witness the eagerness and anxiety of the pupils as they come together, after the toils and labors of the day, to receive lessons of light and knowledge from their teachers. They seem to be very anxious to learn, and teaching them must be like feeding the hungry. Many pupils are foreigners who are scarcely able to understand our language, and this class usually make great proficiency in learning to speak and read the language of their adopted land.

These schools are indeed a blessing to our city and to the country. Besides the elements of education which they impart, they exert a great moral influence over those who attend them. Thousands are thus restrained from temptations to evil and dissipation that surround the youth of a large city. Hardly a greater boon could be conferred on this class, and doubtless multitudes will yet bless the day that they entered the *Evening Free Schools*.

## NOTICES OF PUBLICATIONS.

**ENGLISH GRAMMAR. THE ENGLISH LANGUAGE IN ITS ELEMENTS AND FORMS, with a History of its Origin and Development.** Designed for the use of Colleges and Schools, and as a work of reference for Professional Men. By William C. Fowler, late Professor of Rhetoric in Amherst College. Large octavo; pp. 675; price \$1 50. Published by Harper & Brothers, New York, 1850.

This work is divided into *sight parts*. Part I. treats of the origin and history of the English language; part II. of its phonology; part III. of its orthography; part IV. of etymology, the parts of speech, derivations, etc.; part V. of its logical forms; part VI. of syntax; part VII. of rhetorical forms; part VIII. of poetical forms, punctuation, etc. Thus it presents a full grammar of the English language. This is decidedly the most complete treatise on our language that we have ever seen. There has long been needed some work for the use of teachers more extensive than the text-books in common use—one which would give them large and comprehensive views of the science of grammar, and thus the better qualify them to impart thorough instruction on this subject. We believe the work now before us to be more complete and systematic, and better adapted to supply this want, than any other published. It is one which every teacher ought to possess, and carefully study. As a work of reference it is invaluable.

**AMERICAN EDUCATION, ITS PRINCIPLES AND ELEMENTS.** Dedicated to the Teachers of the United States. By Edward D. Mansfield. Octavo; pp. 330. Published by A. S. Barnes & Co., New York, 1850.

This work treats of an American education—an education adapted to our institutions and wants as Americans; of the teacher—his teachings and character; of the utility of mathematics, astronomy, and history; of the science of language; of the means of education; of the constitution—the law-book of the nation; of the Bible—the law-book from Heaven; and of the proper education of woman.

It is written in a lucid and comprehensive style, and aims to present principles connected with education which lie beyond the details of books and the modes of instruction. It is worthy a place in the library of every American.

**THE DISTRICT SCHOOL AS IT WAS.** By one who went to it. Revised edition, 12mo; pp. 206. Published by Phillips, Sampson, & Co., 110 Washington Street, Boston. For sale by Dewitt & Davenport, Tribune Building, New York.

This work was written by the Rev. Warren Burton, to aid in the improvement of common schools. The style of the book is entertaining, and the pictures of school scenes are drawn so life-like and amusingly, that they expose the defects of certain modes of teaching and school management in a manner calculated to fix the attention of even the least thoughtful on the subject. We would advise every teacher to read it who deems the district schools that were so near what the district schools should be, that he still lingers in the "old way."

**POLYGLOT POCKET-BOOK, for English, German, French, Italian, Spanish, and Portuguese Conversation;** designed for the use of Students and Travelers. Containing guides to the pronunciation of the above-named languages; a vocabulary of words in common use; the conjugation of auxiliary verbs practically applied; familiar and elementary phrases and dialogues; proverbs and idioms; forms of cards, bills, orders, receipts, bills of exchange, and commercial letters. By Isaac Strause, Professor of

Modern Languages. Price \$1 00. Published by William Radde, No. 332 Broadway, New York, 1850.

There, reader, you have a good description of the above work, from its title-page. We can give no better. We doubt not but it will be found a valuable aid to those who desire such a guide.

**"THE MANHATTANER IN NEW ORLEANS; or, Phases of 'Crescent City' Life.** By A. Oakley Hall. 12mo; pp. 190. Published by J. S. Redfield, Clinton Hall, New York, 1850.

This work comprises sketches which were written at New Orleans in the years 1846 and 1847, and appeared in the "Literary World." Their favorable reception by the public induced the author to revise them, and present them to the public in a book. He describes the life and scenes in that city in an easy and interesting style, showing characteristics of the people in spirited descriptions.

**THE INTERNATIONAL MONTHLY MAGAZINE, of Literature, Art, and Science.** Published by Stringer and Townsend, 222 Broadway, New York. Price \$3 00 a year, or twenty-five cents a number.

This magazine is published in a large octavo form, of double columns, embellished with illustrations, and each number contains from 144 to 160 pages. It has already completed its first volume, comprising four numbers, which, having been neatly bound, form an interesting work of over 600 pages. This volume is sold for \$1 25. The December number, which is the first of a new volume, is still more interesting than its predecessors. It contains a wide range of interesting reading. The articles on Authors and Books, and Recent Deaths of Distinguished Persons, is a very valuable feature of the work.

**HARPER'S NEW MONTHLY MAGAZINE.** By Harper & Brothers, New York. Price \$3 00 a year.

The number for December, which commences the second volume, is an excellent one. This magazine has attained a circulation of nearly 50,000 copies in the short space of six months; pretty good evidence of its popularity.

**THE BOOK OF THE WORLD;** being an account of all Republics, Empires, Kingdoms, and Nations, in reference to their geography, statistics, commerce, etc., together with a brief historical outline of their rise, progress, and present condition, etc., etc. By Richard S. Fisher, M.D. In two octavo volumes; pp. 622, 727. Illustrated with maps and charts.

This is a valuable contribution to American literature. As a work of reference it is very useful, and richly deserves a place in every library. Trustees would do well to include it in their purchases for common school libraries. To the teacher it unfolds a vast amount of useful information, that would aid him in giving interest to the study of geography and history.

**NEW AND VALUABLE MAPS of the United States, embracing Central America, Mexico, California, and showing the new territories,** just published by J. H. Colton New York. See notice on *fourth* page of cover.

**ACCIDENTS AND EMERGENCIES.** By Alfred Smece, F.R.S., with alterations, corrections, and appendix, by Dr. R. T. Trall, illustrated with engravings. Published by Fowlers & Wells, Clinton Hall, 131 Nassau Street, New York. Price 12½ cents.

This work is intended as a guide for prompt treatment in accidents and emergencies, and thus to prevent many serious results consequent upon the absence of medical aid, and ignorance of the proper means to be used. It can be sent by mail.

## INDUSTRY.

Words by W. E. Hickson.

WM. B. BRADBURY.  
From the "Young Melodist," by permission.

1. I re - mem - ber a les - son which was not thrown away—  
Hands were made to be use - ful, if you teach them the way; }  
2. And to speed with your la - bor, make the most of to-day: }  
As for grief and vex - a - tion, let them come when they may, }

3. In the world would you pros - per, then this coun - sel o - bey—  
Let your own hands sup - port you till your strength shall de - cay, }

Learn be - times to be of use: don't lose too much time in play; }  
Therefore, for your-self and neighbor, make them use - ful ev' - ry day. }  
What may hin - der you to - morrow, it's im - pos - si - ble to say. }  
When your heart is in your la - bor, it will soon be light and gay. }

Out of debt is out of dan - ger, and no cred - it - ors to pay: }  
And your heart should nev - er fail you, e - ven when your hair is gray. }

Chorus for each Stanza.

*f* Work a - way while you're a - ble, *p* Work a - way while you're a - ble,  
Work a - way while you're a - ble, *f* Work a - way while you're a - ble, *p* Work a - way while you're a - ble,

*f* Work a - way while you're a - ble, *f* Work a - way, *p* Work a - way.  
Work a - way while you're a - ble, *f* Work a - way, *p* Work a - way.



## SCHOOL PROGRAMME.

THE following article, by WM. F. PHELPS, is a continuation of the subject on the last page of the Student for December. The programme here presented is given only to illustrate the system which should be adopted in the division of time for the various recitations of the different classes, that each study may receive its due attention, and *not* to be copied by teachers. Each teacher must form a programme for himself, adapted to his own school.

It will be seen from the following programme of the Experimental Department of the New York State Normal School, that only a portion of the classes are engaged in recitations at one time, and it is expected that those classes which are not reciting will be preparing for their next recitations by study. Hence the classes marked B, D, and C, in this programme, may be studying arithmetic, and A class grammar, while the classes E, F, G, and H are spelling and reading. When the classes A, B, C, and D are reciting, E, F, G, and H may be studying their spelling lessons, and so on, alternating from recitation to study.

Ed.

## PROGRAMME.

Time.	Exercises.
From 9 A.M. to 9.20.	OPENING EXERCISES.
9.20 to 9.45.	H Class. Spelling and Reading. G Class. Reading. F Class. " E Class. "
9.45 to 10.15.	B Class. Mental Arithmetic. D Class. " A Class. Grammar. C Class. Mental Arithmetic.
10.15 to 10.45.	WRITING.
10.45 to 10.55.	RECESS.
10.55 to 11.20.	E Class. Spelling. F and G Classes. Spelling. C and D Classes. " A and B Classes. "
11.20 to 11.50.	A Class. Geography. B Class. " Indians. " C Class. "
11.50 to 12.20.	H Class. Reading and Mental Arithmetic. E Class. Geography. G Class. " F Class. "
12.20 to 12.30.	RECESS.
12.30 to 1.	C Class. Grammar. B Class. Written Arithmetic. D Class. " A Class. " "
1 to 1.30.	F Class. Written Arithmetic. E Class. " Indians. " " C Class. " "
1.30 to 1.55.	E Class. Mental Arithmetic. F Class. " G Class. Primary Arithmetic. D Class. Geography.
DISMISSION.	

The above is a copy of the present programme of our experimental department. In order to make it well understood, we will remark that there are in this department about ninety-five pupils, including four Indians. These pupils are from seven to seventeen years of age,

and are organized into eight separate classes, besides the Indian class, although there are, perhaps, but three or four grades of scholarship. The division into eight classes was made to avoid *too large* classes.

The number of recitations during the day is thirty-two, besides a writing exercise and two recesses. The school is instructed by four teachers for five hours daily, so that there are four recitations progressing at one time, giving to each teacher eight recitations or exercises per day, besides the supervision of the writing. As our sessions are five hours in length, we may have ten half hours for the eight classes of each instructor. But we must deduct twenty minutes for the morning *chapel exercises*, thirty minutes for the writing, and ten minutes each for two recesses, making in all seventy minutes, or one hour and ten minutes, to be subtracted from five hours, leaving three hours and fifty minutes for actual recitations. Now this will give us seven half hours and twenty minutes over, for the eight classes of each teacher. But as is readily seen, by inspecting the above programme, the younger classes in some of their exercises are tasked but twenty-five minutes at a time. This occurs in two instances, which gives us ten minutes to make up our eighth half hour, thus allowing the amount of time requisite for the proper training of all the pupils.

It is believed that no more than one half hour should be devoted at a time to the exercises of a class in our primary schools; indeed, for the younger pupils, from twenty to twenty-five minutes will be found to be as long as the attention can be arrested, and this is certainly as long as their powers can be taxed without injury to health, both of body and mind.

The grade of the classes in the above *scheme* will be understood by referring to the letter-name standing opposite to each; thus the most advanced class is the A, and the next B, etc. The A class, in addition to the studies named on the programme, is pursuing the subject of physiology, having completed intellectual arithmetic, and for the present dispensed with reading, as have the B, C, and D classes. The Indian students are pursuing, besides the studies named above, intellectual arithmetic, spelling and defining, and reading.

We think that the above "programme" will, in the main, be found to accord with the principles laid down in our preliminary essay, and if it shall afford to the young and inexperienced teacher one ray of light upon the important subject of school organization, we shall feel amply repaid for the labor of preparing this imperfect article. No teacher, of course, can think of blindly copying such a scheme; but, on the contrary, he must study well the circumstances in which he is placed, and in framing this *great chart* of his daily labors, must adapt it to those circumstances, and to those alone.

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# THE STUDENT.

## THE IMPORTANCE OF MENTAL DISCIPLINE.

BY LYMAN BEECHER, D. D.

IT seems to be thought by many, that the design of education is the communication of knowledge to passive mind, to be laid up for use in the storehouse of memory. But as well might all the products of agriculture and the mechanic arts be laid up for future use by the young agriculturist and mechanic. It is the acquisition of vigor and skill for a future productive industry, which constitutes a proper physical training; and it is vigor and dexterity of mind in the acquisition and application of knowledge, which constitute the object of mental training. \* \* \* \*

Elementary principles must be ascertained. No man can understand any science, or any thing, who can not lay his hand on the elementary principles, and by the light of these trace out the relations and dependencies of the whole. These are the keys of knowledge, to which all the sciences open their arcana, and without which they remain inexorably shut to all manner of demand and solicitation.

Without this knowledge of first principles, a man will behold truth always in isolated fragments, and be surrounded by a wilderness of light. Such knowledge is like a mass of disordered mechanism; confusion worse confounded, and utterly incapable of use; a maze, overwhelming and inextricable.

There must be precision of thought. The mind can not be thoroughly exercised without it; and nothing worthy of the name of knowledge can otherwise be gained. There are many who go round a subject, and pass between its parts, and verily think they understand it, who, when called upon for an accurate description, can only hesitate and stammer amid the glimmering of their undefined moonbeams of knowledge.

Why is this? It is because they have acquired no definite knowledge of the subjects they have studied. They understand all subjects in general and none in particular; and for the purposes of exact knowledge adapted to use, might as well have been star-gazing through a dim telescope in a foggy night.

Every thing is what it is, exactly, and not merely almost; and for purposes of science or use, a hair's breadth discrepancy is as fatal as the discrepancy of a mile. Who could raise a building where every mortice and tenon only almost fitted—or construct a useful almanac, when his calculations were almost, but not altogether exact?

It is this precision of knowledge which it is necessary to acquire; and without it, not only are the blessings of an education lost, but the multiplied evils of undisciplined minds—indefinite conceptions and fallacious reasonings, and the bewilderment of a declamatory flippancy of specious words—are poured out upon society with an overflowing flood, sweeping away the landmarks of truth and principle, and covering the surface with brush, and leaves, and gravel.

No wonder that skepticism is rife, which proclaims knowledge to be unattainable, and all things doubtful. What other result could be expected from minds reared without first principles, and reasoning without precision of conception, in respect either to words, thoughts, or things? \* \*

The art of independent investigation is of primary importance. The student should be accustomed to explore every subject, to analyze and take it apart, ascertain and define its elementary principles, and all its dependencies and relations, and label the whole with letters of fire, and put it together again; then he will under-

stand it, then he will never forget it, and then, everywhere and instant, it will be ready for use.

Now this can never be accomplished by lectures and oral instruction, from the simple consideration that the act of receiving knowledge, and the act of acquiring it by personal efforts, are entirely different in respect to mental exertion and thorough attainment.

In the one case, the mind is passive, and records upon the tablets of memory only a few fragments of what is said, soon to be effaced, and recovered only by recurring to imperfect notes; while in the other, the mind's best energies are employed in unlocking and dissecting the subject, and the mind's own eyesight in inspecting it, and there results the mind's accurate and imperishable knowledge of it.

I do not mean that lectures are useless, or to be dispensed with; but they are to be only the important aids of original investigation. The young adventurer must have some stock in trade to begin with, some raw material for his mind to work upon; and on some plain subjects perhaps he has it. Let him experiment then first on the most familiar subject. Let him reconnoiter his own mind, and ascertain how much and what he knows, exactly, on the subject, and put it down in definite memoranda; and if they are the elementary points, it will be easy by their light to follow out their relations and dependencies, from center to circumference; and if they are remote inferences and relations, it will be easy to follow them up till they disclose the elementary principle of which they are the satellites.

When this has been done, and all that his own ingenuity can disclose is found out, he may consult authors, and enlarge and connect his views by their aid. When called to investigate subjects which are beyond the sphere of his incipient knowledge, conversation and lectures may open the door of the temple, and put in the hand of the young adventurer the golden thread which may lead him out of darkness into open day. \* \* \*

Mind which has opened the fountains of knowledge will thirst and drink, and thirst and drink forever. It is discipline

which doubles its capacity, its economy of time, its energy of application, the amount of its acquisition, and the duration and amount of its active usefulness.

Few minds uninitiated in the habit of investigation pass, without faltering, the meridian of life, or move on after it, but in the commonplace repetition of commonplace ideas; while to minds exercised by use to analyze and decompose and reconstruct the elementary order of things, the work is ever interesting, ever new, and the product ever fresh, original, and bright as the luminaries of heaven.

The results of such training will be eloquence in the pulpit, eloquence at the bar, and eloquence in the halls of legislation, such as none can sleep under nor resist, and whose victories, when achieved, will, like the battle of Trafalgar, leave the world in a blaze. \* \* \*

Popular, powerful, efficacious elocution is the result of the best order of mind, with all sorts of the best training. There must be mental vigor, precision of thought, a comprehensive knowledge of men and things, condensation, taste, beauty, and power; and then a subject, and an object, and a soul on fire, in high and arduous effort to accomplish an end.

What produced the immortal eloquence of Demosthenes? A mind which Heaven created; the culture of it by his own efforts; the stimulus of it by a popular government, and the provocations of Philip of Macedon.

Instruction may correct faults, and reduce to order the excess of exuberant feeling; but you might as well teach artificial breathing as artificial eloquence. Teach men how to think, and how to feel, and, with good linguistic culture, you can not prevent their being eloquent; you could as well stop thunder storms and volcanoes as the electric out-burstings of soul, with fervid, overflowing energy.

Oh! if mind *has* waked up, and broken her fetters, as they say, I hope she has got her blood warm, her mouth open, and her tongue loose, that nature herself may speak with her own tones, look, and gesture, instead of the miserable imitations of art.

Let the head be furnished, the tongue

be well skilled in the use of language, and the soul filled with high patriotic and religious feeling, and when the occasion comes demanding eloquence, it will be there; and men will not need a looking-glass to practice before; but the soul will take possession of the body, and inspire intonation, and look, and gesture, and nature will be justified of her children.

*Selected.*

## THE WIDOW'S MITE.

BY MISS EMELINE DE WITT.

JUDAH's temple rang  
With rich, clear strains of sweetest voice-music.  
The tones had thrilling power, and yet were mild  
As morning's early breath that wakes the flowers;  
And, truth-entranced, amidst the wondering crowd  
That eager thronged that spacious dome, stood priest,  
And scribe, and self-sufficient Pharisee,  
Whose scorn-curl'd lips, as they had entered there,  
Told that they came to sneer and cavil. Now,  
Their boasted love was awed and voiceless before  
The simple eloquence of Jesus.

Anon,

Amid the gathered throng, the Master sat,  
Bathed in the temple's softened light, that seemed  
A holy, gleam-like glimpse of heaven. Silence,  
Like the low hush of nature when the storm  
Hath spent its force, was brooding there,  
Save when the rich men cast their offerings  
Into the treasury, and the echoing walls  
Sent back the sounds sonorous.

Jesus marked

Their gifts, but with a silent sternness  
That awed His followers.

But, lo! His brow  
Its look of sternness lost, when through the crowd

A slight and trembling woman made her way,  
Clad in that garb of woe that tells how close  
The heart is linked into the spirit-land.  
Her widow's veil, half thrown aside, revealed

A face where sorrow's penciled shade did give  
A chastened beauty to the matron's bloom;  
And care sat lurking in the downcast eye,  
But it was care all softened and subdued  
By some deep, holy feeling.

Oh, sad and lone

The hearth-stone whence she'd come! There,  
poverty

And toil were guests; but the meek Master's  
words

Had stirred a new and living fountain there,  
Whose waters gushed unceasingly, and made  
Sweet heart-music. And so she came, in all  
The fervor of a new-born hope, to bring  
A gift, soul-prompted, to her God.

Yet,

Timidly she glanced around, as half afraid  
That some proud Jew might scorn her humble  
gift;

But her eye met the mild look of Jesus,  
And, reassured, with steady hand she cast  
The hard-earned all, a simple mite, amid  
The massy silver, and the yellow gold  
That glittered there, and noiseless and unnoted  
That widow's offering fell.

Say'st unnoted?

Ay, yes, by those whose hearts the pride of life  
And worldly pomp had seared; by those whose  
gold,

E'en at the altar, wore that earthly hue  
That wins so many a soul from Heaven,  
And to which the heart still clung when custom  
Had bade them lay on charity's sweet shrine  
A soulless offering. But Jesus saw  
That deed, and marked it for the judgment.

Then,

Turning to His faithful twelve, enforced,  
As was His wont, a holy lesson—yes,  
A holy lesson! and its breathings pure  
Have blessed full many a weary toiler,  
And helped to fill the treasury of the Lord  
With alms He best doth love.

No napkin's fold

Should bind our talent, then, although but one  
Be to our feeble care intrusted; for  
Many a noiseless deed of love, by man  
O'erlooked, shall, in that nicely-poised scale  
Which God adjusts, like that poor widow's  
mite,

Far, far outweigh the gift loud trumpeted,  
The pompous deed world-blazoned, and the long  
And loudly echoed prayer.



ANDREW COMBE, M.D.

BY N. ALLISON.

**A**NDREW COMBE was born at Livingston's Yards, near Edinburgh Castle, Scotland, on the 27th of October, 1797. He was the fifteenth child, and the seventh son of George Combe. The family subsequently increased to seventeen children. Andrew was a lively, active, and amusing child, yet his droll humor manifested itself more in his actions than in his speech.

In the summer of 1803 he was sent to school, and continued under the care of the same teacher until 1805. In speaking of his first two years at school, Mr. Combe says, "I learned nothing but reading and spelling in a very humdrum fashion." In October, 1805, he was sent to the High School, under Mr. Irvine, and remained in that institution for four years, making good proficiency in his studies. After

leaving this school, he entered the University.

In April, 1812, he was bound to Mr. Henry Johnston, surgeon in Edinburgh. At first he seemed much opposed to this, but soon became willing to study medicine, and attended closely to his business, though his father told him he might leave, if he were not suited with it after a fair trial. It was not long before he acquired a fondness for his profession, which lasted him through life.

In his twentieth year, 1817, he was able to pass as a surgeon, and he next repaired to Paris, to perfect himself in his profession. He remained in that city two years, and then undertook a journey on foot through Switzerland, and the north of Italy. This was performed at the close of a long course of hard study, and it is

supposed that it materially injured his constitution.

Soon after returning to Edinburgh, in the autumn of 1819, he was attacked with a pulmonary disease, in consequence of which he passed the winter of 1820-1 in Italy; and the winter of 1821-2 in France and Italy. He returned to Edinburgh with improved health, and in 1823 commenced the practice of medicine in that city. In 1825 he graduated at the medical college in Edinburgh.

In 1831 he was obliged to leave his practice and go to Italy for his health. He returned to Scotland in 1833 and resumed his practice, and in 1836 was honored with the appointment of physician to the king and queen of the Belgians. He attended the royal family in Brussels for several months, but the climate was so unfavorable to him that he returned to his native land. However, he continued to act as consulting physician to their majesties, and occasionally paid them a visit.

After this he was frequently absent from Scotland on account of feeble health. In 1847 he came to the United States, visited New York, Philadelphia, and West Point, on the Hudson River. But he was soon compelled to return home, and in the month of August, 1847, he died, aged forty-nine years.

Dr. Andrew Combe was of tall stature, his height being upward of six feet. His person was slender, and during his later years he stooped considerably in consequence of feeble health. The expression of his voice, countenance, and dark, beaming eyes, was that of intelligence, goodness, earnestness, and affection. When a boy he never fought or had a downright quarrel with his playmates; and it always pained him to see others quarrel and fight.

To Andrew Combe are we indebted to a great degree for the application of the principles of physiology to education and the preservation of health. Some of his works relating to this subject are, "The Principles of Physiology applied to the Preservation of Health, and to the Improvement of Physical and Mental Education," and "The Physiology of Digestion," etc.

He devoted much labor to the study of

mental philosophy as unfolded by the science of Phrenology. From this study he says, "I derived the utmost advantage, greater, indeed, than from any other single branch. By it I was enabled to gain a firmer hold on the confidence of my patients, pointing out to them the influence of the mind over the physical energies of the body, and the harmonious development of their moral, physical, and intellectual natures."

The following extracts from articles which appeared in Edinburgh papers after the decease of Dr. Combe, will give a good idea of the manner in which his character and talents were appreciated where he was best known:

"The personal character and private life of Dr. Combe formed a beautiful and harmonious commentary upon his writings. In the bosom of his family and the limited social circle to which his health confined him, he was the same benignant and gentle being whom the world finds addressing it in his compositions. No irritability attended his infirm health; and no jealousy did he feel regarding those whom superior strength enabled to outstrip him in the professional race."

"Kindly and cordial to all, he did not seem to feel as if he could have an enemy—and we believe he scarcely had one. Never did the ranks of physic lose a more estimable member; and rarely has the grave closed over a gentler, truer, or wiser man."

## HOME INFLUENCES.

BY MISS ELIZA A. CHASE.

To the influences that are thrown around the early part of our existence, the habits and character of after life may be traced; and the most efficient and lasting of these influences are those of home. So great and so extensively felt is the love of home, that it has become the theme of the poet and the subject of the painter's pencil. How many hearts have responded to the thrilling strains of "Home, sweet home;" and how many eyes have been dimmed with tears at the sight of some quiet fireside scene, so

strangely like that which busy memory paints!

Who, among strangers, in sickness and in want, has not longed for the light step and loving voice that awaited him at home? And who, suffering that worst disease, the sickness of the heart—who that has seen life's brightest scenes grow dim with the mists of sorrow, has not felt that if earth has healing for such bitter woe, it is in the sweet endearments of home? Who, when the shadows of age are stealing slowly and steadily over him, shrouding the thoughts and feelings of later years, does not look fondly, tenderly, toward his childhood's home, and cherish those blessed memories whose pure light lingers to the last with man, and is lost only by being merged into the more resplendent light of an eternal home?

Even our Saviour acknowledged the power of home. How touching are His words to one who had offered to follow Him: "Foxes have holes, and birds of the air have nests, but the Son of Man hath not where to lay His head." And when in His last dread agony, when He was drinking that bitter cup which He had prayed might be removed, if consistent with His Father's will, His heart yearned toward her who, with a mother's undying love, had followed Him to the last, and amid the scoffs of His enemies He looked on her and on the disciple whom He loved, and said to her, "Woman, behold thy son;" to him, "Behold thy mother." To whom should He commend that stricken mother but to the one He loved? "And from that hour that disciple took her unto his own home." He well knew that her bruised and bleeding heart needed kindness and sympathy, and to what place better adapted to afford solace in her trials could he take her than to his "own home?"

Home! There is a sanctity in the word. There center the dearest, fondest hopes of life. To this, as the pleasant place of rest, turns the traveler, weary with his toilsome journey; the mariner, tossing on the treacherous ocean; the enthusiast, sated with the lore of antiquity; the child, fatigued with play; and he among whose locks the busy fingers of time are weaving the silver tissues that presage decay.

Such is home, as portrayed in its brighter aspect; but, alas! there are homes in which are engendered strife and discord, sullenness and misanthropy. Many a young man may date his first step in the path of ruin to the want of congeniality at home. Harsh and bitter words and open rupture are not necessary to render the fireside circle unpleasant, but a want of sympathy, an indifference to each other's feelings, an omission to provide proper intellectual enjoyment and rational recreation, has driven many a youth into vicious company, to the bar-room, or the gaming-table.

And how many an inexperienced girl has gone forth alone into the wide world, or joined her destiny to one she could not love, only to escape the thralldom of an ungenial home! How many men find their own firesides so cheerless that they gladly seek the society of their convivial friends, till the claims of their family are forgotten! Let all our homes become what they should be, and they would not be thus deserted.

There are no ties purer, stronger, nor more sacred than those which bind a family together. Brothers and sisters are growing up under the same influences, receiving the same instruction, the recipients of a common care and the objects of a common love, and, holding all things in unison, their hearts should beat as one.

Sincerely is that young man to be pitied who has no loving sister kindly to advise and gently to remonstrate, or by the irresistible influence of her quiet, unobtrusive love to keep his feet from treading the dangerous paths of dissipation, by presenting a lure in the pleasing attractions of home. And none the less to be pitied is she who has no brother by whose experience she may profit, and from whose counsels she may learn.

Man elevates and encourages woman; woman refines and softens man, and nowhere is this influence more powerfully felt than in the home circle. "That young gentleman has intelligent and refined sisters," observed a lady of a young man; and on being asked how she knew, replied, "I see it in his manners." With equal truth it might be said of some, "That young lady has manly and virtuous brothers."

Earth presents no higher spectacle of happiness than a quiet fireside circle of parents, brothers, and sisters, entering with zest into the amusements or intellectual enjoyments of life. The toils of the day are ended, and the shades of evening are gathered around the loving band, while the mother and sister ply the busy needle, the father or brothers read for the entertainment of the rest, or enter into the cheerful conversation, or their voices unite in the pleasant song, or all engage in rational and necessary recreation.

Blessed, thrice blessed is he whose home influences are of this kind. Forever will he cherish these memories, and carry with him a talisman which shall never fail—the memory of his innocent days, a mother's look of love, the pressure of his father's hand in blessing, a sister's and a brother's unselfish devotion. And though he should wander from the paths of rectitude, and bring sorrow to his parent's heart, or dim that sister's eye, or cause that brother's cheek to crimson for his misdeeds, still, at times, the thoughts of other days will come over him, subduing him to contrition; and who shall say that there shall not come from the happy and innocent past a voice to win him back to purity and peace?

When Coriolanus, burning with revenge against the city which had thrust him forth from her bosom as an unworthy thing, returned with a powerful army to ravage her temples and deluge her streets with blood, no entreaties of his countrymen could turn his iron purpose; but that stern and vengeful heart could not resist the pleadings of his *mother* and his *sister*. To their supplications he yielded, and "Rome is saved, but thy son is lost," could have been wrung from that imbittered heart by no other power on earth.

What was the character of that mother and sister? Ah! the son and brother could look back through the long vista of years, darkened, it may be, by the shadow of great crimes, to the pleasant scenes of his happy home, and to the magic influence of the love of his noble mother and sister he yielded what the hand of power could not subdue, and stood before his native city a more than conqueror—a *man*.

Would we have our homes what they

should be, it is to mothers and sisters that we must look. They must see that around the fireside circle cluster those attractions which make home the dearest and most sacred spot on earth. But on sisters, more especially, does this duty devolve; they are the more intimate associates of the brothers, whose restless spirits yearn for companionship and sympathy. Let them see that those brothers do not seek in the whirl of dissipation what they look for in vain at home, but let the present be an earnest of that future home in the "many mansions" of our Father, where no ties shall be severed and where partings are unknown.

### THE LADIES OF MILAN.

**T**HESE ladies dress with much propriety. Their chief aim appears to be to emulate each other in simplicity. The gay colors so common in southern Italy are seldom worn by them. They are accustomed to brush their hair completely from the forehead and temples. Capes of lace are worn, fitted neatly to the bust, with a narrow neck collar, hid by a plain pink or azure-colored ribbon. During the revolution it was the tri-color. The hats are of the cottage form, rather small, and cut in a very modest style.

The favorite flowers among the ladies are the camelia and the dahlia. Their hats have, upon the left side, a large full-blown camelia or dahlia, without any other ornament. The bouquets for ladies are principally formed of these flowers, and the garlands and floral offerings cast upon the stage to popular actresses are of the same composition.

Speaking about hair, it may not be amiss to say that the ladies of Sorrento, the birthplace of Tasso, braid their tresses and then arrange them in the form of a wreath, such as artists are wont to place upon the brow of their favorite bard.—*Selected.*

THE sum of behavior is, to retain a man's own dignity without intruding upon the liberty of others.



## Coats of Arms, or State Seals.—No. 10.



### RHODE ISLAND.

**T**HE Coat of Arms of the State of Rhode Island, as represented on the Seal of the state, consists of a white shield on which is an anchor with two flukes, and a cable attached. Above the escutcheon is the word *HOPE*; and from each upper corner of the shield are suspended unlettered labels.

The white escutcheon, and the symbol represented on it, are designed as an allusion to those principles of civil and religious liberty which led to the founding of the colony of Rhode Island, and in which the faith of the citizens of the state is still deeply *anchored*.

The motto *HOPE*, above the escutcheon, directs the mind to the uncertain future, anticipating the growing prosperity of the state, and the perpetuity of its free institutions; while the unlettered labels, denoting that events are still progressing in the march of time, wait the completion of history before the destiny of the state shall be recorded on them.

Rhode Island is the smallest state in the Union, being only forty-six miles long from north to south, and about thirty-five miles

wide from east to west, and containing 1,360 square miles, of which about 130 are embraced in Narraganset Bay. It is bounded on the north and east by Massachusetts, south by the Atlantic Ocean, and west by the State of Connecticut. It is divided into five counties, and contains a population of 147,500.

The northern part of the state is hilly, and that near the coast low and level, but healthy. Narraganset Bay contains several islands, the principal of which is Rhode Island, and from this the state took its name. On this island Newport is situated, and, being one of the most delightful of summer residences, it is thronged during the season of frequenting fashionable watering-places. From the beauty and fertility of this island it has been called the *Eden of America*.

This state was settled in 1636 by Roger Williams, the pastor of a church in Salem, Massachusetts, who was banished from that colony on account of his religious toleration. He left Salem in the winter and wandered in the wilderness for fourteen weeks, often without a guide, and with no

house to afford him shelter but a hollow tree or the wigwam of an Indian.

At length he was joined by a few of his faithful friends from Massachusetts, with whom, five in all, he embarked in a frail canoe, sailed down the Narraganset Bay, and landed where Providence now stands. There he purchased land of the Indians, formed a settlement, which, in token of his firm trust and confidence in the mercies of God, he called Providence.

He founded his colony on the broadest principles of civil and religious liberty, where the will of the majority should govern the state in civil things, and God alone should be respected as the ruler of conscience. In 1644 Roger Williams went to England and obtained of the Plymouth Company a patent of the territory of Rhode Island, and, in 1647, delegates, chosen by the people, held a general assembly, and organized their government and established a code of laws.

In 1663 Rhode Island obtained a royal charter from King Charles II., which continued in force, except for a short time while Andros assumed the government of the New England colonies, until 1842, when a new constitution was adopted. This state acceded to the constitution of the United States in 1790, and was the last of the original thirteen states that came into the Union.

The State of Rhode Island is extensively engaged in manufactures. It was here that the first machinery for the manufacture of cotton was introduced. In 1727 the only spinning machine in our country was a single spinning-jenny with twenty-eight spindles. This stood in the chamber of the market-house in Providence, and was worked by hand.

At that period carding-machines were not in use in this country, and all the carding and roping was done by hand. But now, less than a century and a quarter since, millions of dollars are employed in machinery for spinning and weaving, and we not only manufacture what is necessary for our own consumption, but also for exportation. Within fifteen or twenty miles of Providence there are several hundred cotton and woolen mills.

The capitals of Rhode Island are Prov-

idence and Newport, at which places the legislature meets alternately in May and October. The election is held the first Wednesday in April. The governor is chosen annually, and has a salary of \$400. This state contains only about seventy miles of railroad, and less than twenty miles of navigation by canal.

Brown University at Providence, the only college in the state, was founded in 1764 at Warwick, and removed to Providence in 1770. There are about 60 academies in the state, and some 450 common and primary schools. The common school education has been behind other states of New England, but within the past few years very great improvements have been made under an efficient supervision.

### THE DOMINICAL LETTER.

**D**ONCE every twenty-eight years the same days of the week occur on the same days of the month, throughout the year. For instance: twenty-eight years from January 1st, 1851, will be Wednesday, the first day of January, 1879; twenty-eight years before the first day of January, 1851, was Wednesday, the first day of January, 1823. This period of twenty-eight years is called a *Solar Cycle*.

In order to connect the days of the week with the days of the year, the first seven letters of the alphabet are used to mark the several days of the week. These are disposed of in such manner, for every year, that the letter A shall always stand for the first day of January, B for the second day, C for the third, D for the fourth, E for the fifth, F for the sixth, G for the seventh, A for the eighth, B for the ninth, and so on, the same seven letters being constantly repeated in their order through all the days of the year. Consequently, all the days which have the same letter fall on the same day of the week.

It is plain from the above that the letter which answers to the first Sunday of a common year will answer to all the Sundays throughout that year, hence it is called the Sunday, or Dominical letter for that

year. The word Dominical is formed from *Dominicus dies*, meaning Lord's day, or Sunday; hence the Dominical letter means simply the Sunday letter, that is, the letter on which all the Sundays of a year will fall.

When we know the day of the week on which the first day of any year comes, it is an easy matter to ascertain what will be the Dominical letter for that year. We have only to name in order the first seven letters of the alphabet, applying one to each day, till we come to Sunday, and the letter corresponding with that day will be the Dominical letter. For instance: the first day of 1851 was Wednesday, and since A stands for the first day of each year, this letter must correspond with Wednesday, B with Thursday, C with Friday, D with Saturday, and E with Sunday; hence E is the Dominical letter for the present year.

A common year contains *fifty-two weeks* and *one day*, consequently the first day and the last day of such years occur on the same day of the week. The first day of 1850 was Tuesday, and the last day of that year was also Tuesday.

If the first day of a year be Monday the seventh day will be Sunday; G being the seventh letter will be the Dominical letter for that year. If the first year were a common one, the following year would begin with Tuesday, and the sixth day would be Sunday; F, being the sixth in order, would be the Dominical letter for that year. If the second year were a common one also, the third year would begin with Wednesday, and the fifth day of the year would be Sunday; E, being the fifth in order, would be the Dominical letter for that year, and so on.

Now, if all the years were common ones, that is, if there were no Leap years, the first seven letters of the alphabet, taken in a retrograde order, would successively stand for Sunday once every seven years. But this simple arrangement is disturbed by the Leap years, each of which contains fifty-two weeks and *two days*.

In order to balance the effect of the additional day every fourth year, and to cause the same letters to fall on the same days of the week after the 29th day of February

that they would have done had no additional day occurred, the whole series of letters must be shifted forward one day after the 29th of February; thus every Leap year has *two* Dominical letters—one for January and February, and the other, which is always the next in the retrograde order of the letters for the remainder of the year from the 29th of February.

Thus it will be perceived that there are *five* different Dominical letters, all standing together in a retrograde order, required for every four years. No more than seven such combinations can be formed with seven letters; hence, in twenty-eight years, all these combinations will be exhausted, and the Dominical letters will be again renewed in the same order as before, during the next twenty-eight years, and the same days of the month will again return to the same days of the week. This period is the Solar Cycle.

As has already been stated, when we know on what day of the week the first day of any year comes, we can easily tell what will be the Dominical letter for that year; but we often may be unable to ascertain this, in which case we require some other guide. The following rule will enable one to find the Dominical letter for any year.

**RULE.**—Add *one fourth* of the given year, less *one*, to itself, and divide the amount by *seven*. Then subtract the remainder from *seven*, and the number left will be the number of the letter which answers to the Dominical letter for that year, calling A, 1; B, 2; C, 3; D, 4; E, 5; F, 6; G, 7. If there be no remainder when dividing by seven, the Dominical letter is G.

In Leap years the letter thus found stands for the remainder of the year from the 29th of February, and the next letter in order stands for January and February.

**EXAMPLES.**—Find the Dominical letter for 1851.  $\frac{1}{4}$  of 1851 = 462. 462 less 1 = 461.  $1851 + 461 = 2312 \div 7 = 330$  and 2 remainder.  $7 - 2 = 5$ ; then 5 is the number of the letter which stands for the Dominical letter for 1851. E is the fifth letter, hence that is the Sunday letter for the present year.

Find the Dominical letters for 1848.  $\frac{1}{4}$  of 1848 = 462—1 = 461.  $1848 + 461 = 2309 \div 7 = 327$  and 6 remainder, which taken from 7 leaves *one*, the

number of the Dominical letter for that year, after the 29th day of February. A is the letter, and B, the next in order, is the Dominical letter for January and February.

N. B. In adding one fourth of the year to itself no account is made of any remainder that may result from the division by four.

Every year which may be divided by four without a remainder is a Leap year, except three of each four centennial years, as 1700, 1800, 1900, etc. The centennial years are common ones unless they are divisible by four hundred without a remainder. The Dominical letters for the common centennial years will be found in the same manner as for other common years.

Having ascertained the Dominical letter for a given year, the day of the week corresponding to any day of the month may easily be found by the following couplet:

"At Dover Dwells George Brown Esquire,  
Good Carlos Finch And David Fryer."

The words in the preceding couplet correspond to the twelve months of the year, and the first letter of the several words mark, in their order, the letter which stands for the first day of each month; whence any other day may be easily found.

EXAMPLES—Let it be required to find on what day of the week the fourth day of July occurred in the year 1849. July is the seventh month, hence Good, the seventh word in the couplet, answers to that month. Now G is the letter which stands for the first day of July, and being also the Sunday letter for that year, it is readily seen that as the first day was Sunday, the fourth day must have been Wednesday.

Suppose we wish to ascertain on what day of the week the third day of March will occur, during the present year. It is the third month, hence Dwells, the third word in the couplet, answers to it. D, the first letter in the word, stands for the first day of that month. E being the Dominical letter for this year, we have but to count D first day, E second day, and we find that the second day was Sunday, consequently the third day of March, 1851, will be Monday.

Again, to find on what day of the week the 9th day of September, 1822, occurred, we take *Finch*, the word corresponding to

that month, and having ascertained that the Dominical letter for that year is F, we perceive at once that the first day was Sunday, consequently the 9th day must have been Monday. In this manner may be found on what day of the week any day of the month for any year will occur.

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## General Intelligence.

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### SCHOOLS OF THE STATE OF NEW YORK.

FROM the recent annual report of the Superintendent of Common Schools for the State of New York, we obtain the following statistics pertaining to common schools.

On the first of January, 1850, the number of school districts in the state was 11,397. The number of children between the ages of five and sixteen residing within said districts was 735,188; and the whole number of children taught in the district schools during the year preceding was 794,500. The amount of money paid for teachers' wages during the same time was \$1,322,696 24. And there was also expended for the purchase of books for district libraries, and articles of school apparatus; \$95,085 54 of library money. The district school libraries of this state contain 1,449,950 volumes, being an average of 127 volumes to each school district.

The state superintendent urges the legislature to provide a more efficient supervision of the schools than can be obtained by the office of town superintendents alone. He proposes the appointment of a county, or an assembly district superintendent, as, without some such supervision, the schools will not become any thing like what they might and should.

The present legislature is also strongly urged so to modify and amend the present Free School Law as to remove all just cause of complaint. For the accomplishment of this he suggests that the funds for the payment of teachers' wages, in addition to the amount received from the state treasury, should be provided for, either by a state tax, according to a uniform standard of valuation, or by county or town tax, assessed in the same manner, or by a combination of all three of these, thus removing every thing from the school districts tending to produce strife and discordant feelings.

**THE INDUSTRIAL EXHIBITION OF 1851.**—In May next there is to be held in London a great exhibition of the productions of the principal countries of the world—a World's Fair. The productions thus gathered together are to be exhibited in an immense palace, built for this purpose, in Hyde Park, one of the largest public squares in London.

The building will be 1,848 feet long by 72 broad, and 66 feet high. This long line is crossed by a transept 408 feet in length, 72 in width, and 108 feet high to the top of its circular roof. The sole materials used in the construction of this palace, with the exception of timber for flooring, are iron and glass. The pillars and supports are of iron, and the walls are glass. The glass used in its construction weighs upward of 400 tons, and contains 900,000 superficial feet.

The sash bars, all together, would measure 202 miles, and there are 34 miles of gutters for conveying the water to the columns, which are hollow, and serve as conductors of the water from the gutters. The glass roof consists of a series of "ridges and valleys," each eight feet wide. The building occupies about eighteen acres of ground. The total area of the ground floor is 752,832 square feet, and that of the galleries 102,528 square feet. The total cubic contents of the building are 33,000,000 feet. The total value of the building, were it to be permanently retained, would be about \$726,000.

The iron work is all brought from Birmingham. One firm supplies the whole amount of glass. The timber used is from the Baltic, and of an excellent quality. Nearly every thing was brought on the ground ready to be put up, so that the loudest sound that reached the ear while building was the clink of the hammer in "closing up" the rivets.

Extensive preparations are now making in this country for sending articles to be exhibited at the World's Fair. Extra accommodations are to be provided for the entertainment of the thousands of persons from foreign countries who are expected to be present at the Fair.

**DISCOVERIES IN ASTRONOMY.**—The planet Parthenope, mentioned on the 42d page of the December number of *The Student* as having recently been added to the group of Asteroids, was discovered by M. Gasparis, of Naples, May 11, 1850.

Mr. Hind, of London, discovered a new

planet, September 18, 1850, and proposed to call it Victoria, but the name of Clio has been substituted.

Another new planet was discovered by Gasparis, of Naples, on the 2d of November, 1850.

**A Comet.**—On the evening of the 1st of January, 1851, William C. Bond, of Cambridge Observatory, discovered a comet, which he supposes to be the same as that seen in 1843.

**RAILROADS.**—It is estimated that there are now 30,000 miles of railroads in the world. Only fifty years have passed since the first railroad, on which the cars were drawn by horse-power, was built in England. Twenty years ago there was not a mile of railway in the U. States; now there are about 8,000 miles of railroads in this country—more than one fourth of all the railways in the world.

In Prussia there are about 1,100 miles of railroads.

**DECLARATION OF INDEPENDENCE BY YUCATAN.**—The steamship Alabama brings news from the city of Mexico to the effect that Yucatan has pronounced against the supreme government, and declared herself independent of Mexico.

**MAMMOTH CAVE IN INDIANA.**—A great mammoth cave has been discovered seven miles north of Leavenworth, Ind. A party of men at first discovered a cavern, or room, large enough for a man to enter, and determined to explore it. The *New Albany Ledger* says:

"They found that this room opened into others, and these into still others, and that apparently there was no termination to the cave. They followed the main passage some four or five miles, according to their best calculations, when they were admonished by their lights that they must return.

"On their way back they visited some of the rooms which they had passed, in which were found large beds of epsom salts in nearly a pure state. We are also informed that the cave contains fine specimens of saltpetre, plaster of Paris, alabaster, etc., of which the party procured many fine specimens. We can now say to our sister state, Kentucky, that Indiana has a cavern which far surpasses the Great Mammoth, as the last discovery, in connection with the great Indiana cave, will make it one of the largest in the United States."

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### HOW TO MAKE PLAYMATES HAPPY.

BY MRS. E. M. GUTHRIE.

**M**OTHER, I shall not play any more with Mary Simmons; I dislike her very much; she is angry and cries unless we are all ready to do her bidding. Half the girls in school won't speak to her now, and she will not get many favors from me, I am sure."

Thus exclaimed little Helen Anson, as she stood in the door on her return from school, her mind filled with some recent exhibition of Mary Simmons' petulance.

"Helen," said Mrs. Anson, "it is not well for you to make resolutions while you feel so unpleasantly. I fear your little playmates and yourself have not tried the power of kindness upon poor Mary's nature."

"But, mother, she is provoked so easily we *can not* get along with her; she is the worst girl to play with that I ever saw; *she* loves no one, and *no one* loves her."

"Then, Helen, is it strange that she is unhappy? I fear your feelings are not what they should be; I will let you think about it until evening, *then* I will hear *your* opinion."

Mary Simmons was a little orphan, and lived with an aunt who indulged her, very much to her own disadvantage, and though her disposition was naturally kind, her aunt's unhappy course made her very selfish.

She was accustomed to have every wish gratified at home, and when she found it could not be so at school, she conducted herself in such a manner as to secure the ill will of most of her

schoolmates. Some were so thoughtless as even to delight in annoying her.

Helen Anson was not so heartless as to unite with these, but she had her faults as well as poor Mary Simmons, and her mother was determined to correct them by mild and gentle means.

In the evening Mrs. Anson reminded Helen of a wish she had often heard her express, to one day become a missionary. "Why, my child," she asked, "would you become a missionary?"

"Why, mother, because it would give me so great an opportunity to do *good*. I wish I were old enough now, I would so delight to be useful to those who have never enjoyed the blessings that I enjoy."

"Well, dear child, I would have you prepare yourself for so great an undertaking by being kind to all around you. Learn to be a missionary to those of your playmates who do not enjoy what you do."

Helen looked down, for she thought of what she had said on her return from school, but her mother's kind words restored her confidence, and she confessed that she had not felt the right spirit toward the poor little orphan.

"My little daughter," continued Mrs. Anson, "have you thought of any way that you can repair the injury that you have done yourself as well as little Mary by indulging these ungenerous feelings?"

"Yes mother, by being very kind to her in future."

"My child, I hope you will adopt this course, but you must be very cautious with Mary; avoid all *rude-ness* toward her, so that she may not *misunderstand* you. Show by all your conduct that you are her friend."

"Mother, dear mother, I will *try* to do this," said the little girl, while a bright smile illuminated her face.

That night Helen Anson did not sleep until the house had been silent many hours. Her mind was so filled with plans for making Mary Simmons happy that she shut her eyes in vain. Poor little Mary ever was before her.

Helen felt that she loved her already, and she arose in the morning joyous as a lark, and her mother saw the strength of her resolution in her happy face.

She was on the way to school very early, and when she reached the school-room her heart leaped with glad surprise to find Mary Simmons there alone. She looked sullenly at Helen, but this was no worse than she anticipated, so it did not chill the warm smile with which she said, "Good morning, Mary, we are both very early this morning."

Mary was so accustomed to the mockery and abuse of her schoolmates that she knew not how to receive this, until Helen's manner fully assured her; then the poor little orphan burst into tears. Her warmest feelings had become almost frozen from neglect, for though her aunt indulged her in every thing *she* could furnish, she had not the power to administer to the most *essential* wants of her nature.

Helen's sweet smile had touched a chord that had long been silent, and the melody which it awoke was acknowledged by a gush of thankful tears. The young philanthropist well understood the effect of her conduct upon Mary, and in opening the foun-

tain of love in another's heart she had found for herself true enjoyment in the practice of real benevolence.

The whole school were surprised by the sudden change in Helen Anson's manner toward Mary Simmons; and though some were so foolish as to treat her with scorn and neglect, when they found that the sullen, quick-tempered Mary Simmons was transformed into a happy, sweet-dispositioned child, and when their teacher told them that it was Helen Anson that had opened the fountain of smiles in that little orphan's heart, they loved her more than they had ever done before.

Never was there a happier child than Helen Anson when she reported her success to her mother; and when Mrs. Anson told her that *this* was the *true* method to fit herself for a missionary, Helen determined that this triumph over her own selfish and perverted feelings should not be the last.

## PRAYER.

BY MARCIA WEBSTER.

Pray, sinner, pray, when wild is tossed  
Thy bark on life's uncertain sea,  
When every gleam of hope seems lost,  
And death and hell are waiting thee;  
When sinks thy soul beneath its load  
Of guilt and shame in dark despair,  
Kneel humbly at the throne of God,  
And thou shalt find relief in prayer.

Pray, Christian, pray, when trials mark  
Each passing hour in life's career;  
When stern temptations gather dark,  
And aroud thy soul in doubt and fear,  
Ne'er let thy faith in God grow dim.  
Ne'er doubt His watchful love and care,  
Cling closer to thy trust in Him,  
And thou shalt find relief in prayer.

Pray, mourner, pray, when dearest ties  
Twined round thy heart are rent in twain,  
When hope in earthly friendship dies,  
And earthly comfort all is vain,

Then turn with all thy griefs to Heaven,  
 There's a solace for thy sorrows there,  
 And freely shall its balm be given,  
 If thou wilt ask in humble prayer

And pray, oh, pray, whene'er ye tread,  
 Through this dark world a thornless way;  
 When not a cloud is seen o'erhead,  
 Then hast thou doubly need to pray;  
 For we are apt to love this life  
 Too well, if naught is here of care;  
 If we know not its scenes of strife,  
 Our only shield from sin is prayer.

### A SIBERIAN WINTER.

**T**HERE is an article written by one who has traveled in the cold northern countries, which gives an interesting description of the extreme coldness of the weather in that region. But before reading it we wish our young friends to look on their maps and see where Siberia is situated.

The traveler in Siberia, during winter, is so enveloped in furs that he can scarcely move. Under the thick fur hood, which is fastened to the bearskin collar and covers the whole face, one can only draw in a little of the external air, which is so keen that it causes a very peculiar and painful feeling to the throat and lungs.

The distance from one halting place to another takes about ten hours, during which time the traveler must always continue on horseback, as the cumbrous dress makes it insupportable to wade through the snow.

The poor horses suffer at least as much as their riders, for, besides the general effect of the cold, they are tormented by ice forming in their nostrils and stopping their breathing. When they intimate this, by a distressed snort and a convulsive shaking of the head, the drivers relieve them by taking out the pieces of ice, to save them from being suffocated.

When the icy ground is not covered

by snow, their hoofs often burst from the effects of the cold.

The caravan is always surrounded by a thick cloud of vapor; it is not only living bodies which produce this effect, but even the snow smokes. These evaporations are instantly changed into millions of needles of ice, which fill the air, and cause a constant slight noise, resembling the sound of torn satin or silk.

Even the reindeer seeks the forest to protect him from the intensity of the cold. Where there is no shelter to be found, the whole herd crowd together as close as possible to gain a little warmth from each other, and may be seen standing in this way quite motionless.

Only the dark bird of winter, the raven, still cleaves to the icy air with slow and heavy wing, leaving behind him a long line of thin vapor, marking the track of his solitary flight.

The influence of the cold extends even to inanimate nature. The thickest trunks of trees are rent asunder with a loud sound, which, in these deserts, falls on the ear like a signal shot at sea; large masses of rock are torn from their ancient sites; the ground, in the valleys, cracks and forms wide, yawning fissures from which the waters that were beneath rise, giving off a cloud of vapor, and become immediately changed into ice.

### WHO CAN NOT LEARN GRAMMAR?

**W**E wish every boy and young man who thinks he can not learn grammar, and those, too, who are in the habit of spending their evenings at stores, groceries, taverns, or any other places in idleness, to carefully read and think upon the following;

"I learned grammar," said Wm. Cobbett, who became an eminent printer and writer, "when I was a private soldier on sixpence a day.



"The edge of my guard bed was my seat to study in; my knapsack was my bookcase, and a board lying on my lap was my writing-desk. I had no money to buy candles or oil; in winter it was rarely that I could get any light but that of the fire, and only my turn even to that.

"To buy a pen or a sheet of paper I was compelled to forego a portion of food, though in a state of starvation. I had no moment at that time that I could call my own, and I had to read and write amid the talking, singing, whistling, and brawling of at least half a score of the most thoughtless of men, and that, too, in hours of freedom from control.

"And I say, if I, under circumstances like these, could encounter and overcome the task, can there be in the whole world a youth who can find excuse for non-performance?"

### THE WIDOW AND HER SON.



PLEASEING story is told of a widow who had a wayward son, and of a singular mode taken to reform him, which presents a warning to those youth who thoughtlessly indulge in folly and vice:

An aged widow had an only son, who repeatedly transgressed. His mother, rendered unhappy by his misconduct, tried numberless methods to reclaim him, but without effect. At last, with great difficulty, she prevailed on him when he committed a bad action, to drive a nail into the wall of his chamber; and when he had done a good act to take one out. In a short time the wall was nearly covered with the marks of his guilt.

After a long time had elapsed, he began to refrain from his evil courses, and conducted himself with so much propriety that the nails gradually diminished, and were at last all drawn out. Of this circumstance he exult-

ingly informed his venerable parent, who with the greatest composure addressed him as follows:

"My son, you have dutifully attended to my advice, and entered into the pleasant path of virtue; but be not so proud that the nails are drawn out, for the marks where they have been still remain; so, likewise, the odium of your former misconduct will not be erased from your character, unless you continue to pursue the path of virtue, and never replunge into the pollution from which you have fortunately escaped."

### "BROTHER JONATHAN."

THE term "Brother Jonathan," which is applied to the people of the United States, as "John Bull" is to the English, is said to have originated as follows:

General Washington placed great confidence in the good sense and patriotism of Jonathan Trumbull, who, at an early period of the American Revolution, was governor of the State of Connecticut. In a certain emergency, when a measure of great importance was under discussion, Washington remarked, "We must consult Brother Jonathan on the subject."

The result of that consultation was favorable. From this event the use of the expression, "Brother Jonathan," became more and more common, till it finally was applied to the American army, and from thence it soon passed to the people at large. This appellation has stuck to us as closely as "John Bull" has to the English.

INDUSTRY, economy, and prudence are the sure forerunners of success. They create that admirable combination of powers in one which always conduces to eventful prosperity.

## Natural History.



### THE PENGUIN.

BY HENRY WILSON.

**A**MONG water birds the Penguin appears to hold the same place that the ostrich does among land birds. The ostrich is the swiftest runner among land animals. It has wings but can not fly with them, yet they serve to waft it forward with greater speed.

The Penguin is the fastest swimmer of the feathered tribes. It has short and small wings, which it uses as oars to increase its speed through the water. Like the ostrich, too, it is very difficult to be captured when in its native element—water.

On land the Penguin is entirely defenseless; it has neither arms to fight

with nor legs to run away. But in the water it is almost beyond the reach of danger. If pursued there it instantly sinks down, leaving only its bill projecting above the water, and if the pursuit be continued it dives and comes up at so great a distance as to baffle all further attempts to capture it.

This bird inhabits the South Sea islands, and the coast of South America, particularly Patagonia, hence the species found there, and probably the largest of the kind, is called the Patagonian Penguin. It is about three feet high when standing on the ground. The back of this bird is black, and the front parts are white.

As may be seen by the above cut the shape of the Penguin is very singular. The feet are placed so far back, that it can not balance its body, like other birds, but is obliged to stand erect, like a man. The wings appear more like fins than appendages for flying, and they are covered with hard, stiff feathers that can hardly be called plumage.

Penguins may be said to be like men, like fowls, and like fishes. Like men they walk upright; like fowls they are clothed with feathers; and in swimming they use their wings as fishes do their fins. They feed on fish, and live mostly in the water. Occasionally they go on the land, where they walk with the body erect. Sometimes flocks of them may be seen on the shore, at a distance, when it is said they resemble a number of children dressed in black, and wearing white aprons.

The nest of the Penguin is made according to circumstances. If in places where there is no fear of the intrusion of man, her eggs are hatched in the sand, without a nest. But in situations that men frequent, she digs a hole several feet deep into the earth, on the side of a bank, and in it builds her nest.

In the work of digging for the nest it is said that several Penguins join and assist each other, and that when the nest is completed, each lays a single egg in it, and thus several hatch their young in the same place. Their voice is like the cackle of geese.

The flesh of this bird is very fat, but it is so fishy and disagreeable to the taste as not to be used for food.

Music is a prophecy of what life is to be: the rainbow of promise, translated out of seeing into hearing.

A word spoken in season, at the right moment, is the mother of ages.

## ASTRONOMY,—NO. 1.

### THE STARS, THEIR HISTORY AND LAW.

BY CAROLINE L. PIERSON.

SISTER, will you not walk with us?" said Ellen Graham to Mary, one evening, as she found her on the porch of their father's elegant mansion. "Here are some of my classmates, Eliza, Rosa, and Nancy, who were so much delighted with your instructions when you walked with us a few evenings since, and they have come with me to beg you to go again.

"We have been studying the trees, plants, animals, and even the rocks, and find in them beauties we never thought of before we took that delightful walk to the spring, and you explained to us some of the wonders of the natural world, in the midst of which we live."

"Girls," said Mary, "I suppose that, like many others, you are reciting lessons at school without looking about and reading in the great book of nature the most wonderful lessons, and applying the knowledge which your books give to solving her mysteries. In fact you have studied as though you were learning of things which you never saw.

"I am glad that our conversation at the spring has awakened in you a desire to study nature, and if you continue to feel an interest, I shall be happy to turn over many leaves with you in this great book.

"I propose that we take our own home, and considering this a miniature world, study its natural history in all the various departments. Thus you will be enabled to apply the principles you find in your books of philosophy, and natural science, to the world around. Then every rock, tree, brook, and shrub will seem to speak an intelligible language to your souls.

"It is too late to walk now, for the

stars are already twinkling and the frost is sparkling in the grass; so we will confine ourselves to the porch this evening. But if you choose, we can wander for a while in the 'garden of Deity, blossomed with stars,' and study those shining bodies whose laws and phenomena are intimately connected with our earth, and may properly be introduced into our natural history.

"In studying geography you all learned your latitude and longitude, but perhaps you did not know that it is to observations on the heavens we owe this knowledge. By applying your mathematics you will soon be able to tell the exact latitude and longitude of this house, and calculate the times for the rising and setting of the sun, moon, and stars for every day in the year."

"Why, sister," said Ellen, "I have always looked in the almanac for these things, and never once thought that I could find them out for myself. I thought that it was a kind of magical guess-work, but now I understand that we all, by study, may become magicians enough to make an almanac, if we choose.

"As for the stars, I have looked at them with a strange kind of fear and wonder. When a little child, my old nurse taught me they were holes in the sky to let the glory of heaven, which was above, shine through. Then again I thought they were angels' eyes, which were closed in the day because the sun was so bright, but at night they opened them and winked as they looked down upon us. I have since learned that these stars are worlds, and have observed that we do not always see the same ones. So, sister Mary, I am prepared to be interested in your instructions."

"Girls, we will then commence at once, as a few of the largest stars have already opened their eyes, as El-

len might say. In reality, they have been shining all day as brightly as they do now, but we did not see them because the light of the sun was so much greater. The stars are always shining, and as soon as the sun goes out of sight at any place they appear.

"The atmosphere has the property of reflecting the light in all directions, and could we find a place where we were not exposed to this reflection, we could see them as well as at night.

"One time a man in London, while looking up a tall chimney in the day, saw the stars distinctly. Curiosity to understand this strange sight led him to study, and in time he became a great astronomer. Persons who have entered deep wells have observed the same, and being ignorant of the cause have in great fright come to the upper air to see what calamity had thus suddenly brought on the night.

"As the earth turns over every twenty-four hours, there has been in succession starlight, and sunlight around its whole circumference. As we are sitting on the porch, the parlor lamp shines brightly through the window, and we can see the stars over our heads and in the east.

"Now, were we to take a ball, and on it place a little being as large as a fly, and commence turning the ball toward the east, the lamp would seem to sink in the west, while the stars would rise in the east, and pass over its head. The fly would probably think that all these bright bodies were moving around his little ball. This will not seem a strange conclusion for the silly fly, when we remember that many of the ancient philosophers thought that all the worlds we see in the heavens moved around our earth every twenty-four hours. They also thought that the earth was flat and stood on the back of some huge animal, but what held the animal they never could tell.

"That the earth is round, or convex, we have many proofs. I will mention one of the most simple. When you are riding over a plain you first see the tops of trees and houses in the distance, and as you approach they seem to rise. When you have studied more you will be able to understand the measurements and calculations of astronomers to learn the shape of the earth."

"Sister," said Ellen, "David knew

the shape of the world, for I was reading in the Psalms this morning where he says of the Lord, 'He hath made the round world.' And I heard the little children reciting from their geography to-day that the world is upheld by the power of God; and they gave a text from Job: 'He hangeth the earth upon nothing.'

"I will bring a geography, and by the lamp shining through the window we can look at a picture of the world."



"Girls," said Mary, "you can see by this picture that what is up to a man on one side of the earth is down to one on the opposite side; the zenith, or point over our head, is constantly changing, and the star that is there now will, twelve hours hence, be beneath us, or up to the people in China. All we can mean by up, is, from the earth."

"It is now six o'clock in the evening of the first day of January, and we will date our observations from this time. You can see in the east a group of very bright stars consisting of two beautiful clusters; one consists of seven small stars called the seven

sisters, or Pleiades. A little to the east of these is the other cluster called Hyades, in the form of a letter A. The whole group is known by the name of Taurus, the Bull. When we go into the house you can look at a plate of it and you will find the Pleiades mark one shoulder, and Hyades the face of the animal."

"If you will look out again, about nine o'clock, you will find it nearly over head, and again toward morning it may be seen going down in the west. Now imagine yourselves the fly on the ball and you can explain the apparent motion."

"Miss Mary," said Rosa, "I see the

beautiful clusters very distinctly, but they do not make the figure of an animal. Why was the name Taurus given to the group?"



TAURUS.

"The heavenly bodies, Rosa, have been subjects of study in all ages, and among those who knew not the true God, they were made objects of worship. It was the custom of the early Eastern nations to make gods of the animals they held in the highest esteem, and also of those persons who had done any great deeds.

"These people were attentive observers of the sky, and as they supposed heaven, or the place of reward, was above, they learned to think there must be the dwelling-place of their favorite deities. They accordingly marked off the heavens into portions, or constellations, and to these gave the names of their gods, whether men or animals."

"I suppose," said Nancy, "as they had no idea of worshipping a God which could not be seen, they thus elevated their deities to the highest throne they could give them, where all might see and worship."

"As we study out the heavens," said Mary, "we shall find it a great book in which the ancients expressed with the stars their strange ideas; thus we shall enjoy a double pleasure.

"The bull was a sacred animal with

the early Egyptians, and highly venerated as a god; he was therefore honored with a place in that beautiful group which we see in the east.

"The Pleiades are said to be named from seven sisters who were thus favored on account of their affection and virtues. One of these unfortunately married a mortal, and her star never after shone so brightly, consequently you can seldom get a sight of it. The whole is probably a fable; the sisters representing the virtues which were most esteemed and the dim star a virtue which had been obscured by vice."

"I suppose, then," said Eliza, "we need not learn from this amusing tale that we must marry none but gods. But hereafter, when we look up at the group of sisters in the heavens, their history shall teach us to beautify ourselves with all the virtues that ornament a woman."

"Girls," said Mary, "you have had your lecture, and Eliza has drawn a conclusion which we hardly thought of reaching when we commenced. I will only remark that Taurus is one of twelve constellations which mark the sun's apparent path through the heavens, all of which we will notice before we mention others."

"To-morrow evening, if you like, I will introduce you to Sir William Herschell, a gentleman who has made many discoveries in the heavens. I have his picture, and will give you a little sketch of his life, that you may know how much we owe to one of our greatest guides."

### LITTLE CHILDREN.

"CANDID and curious, now they seek  
All truth to know and scan;  
And ere the budding mind can speak,  
Begin to study man!

Confiding sweetness colors all they say,  
And angels listen when they try to pray."

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### TRUE DUNCAN AND THE CAT.

ONCE there was a lit-tle boy named Dun-can. The boys used to call him *True Dun-can*, because he nev-er would tell a lie.

One day he was play-ing with an ax in the yard of the school, and while he was chop-ping a stick, the teach-er's cat, Tab-by, came along.

Dun-can let the ax fall right on poor Tab-by's head, and kill-ed her.

What to do he did not know. She was a pet of the mas-ter's, and used to sit on a cush-ion at his side, while he was hear-ing the les-sons.

Dun-can stood and look-ed at the dead crea-ture. His face grew ver-y red, and the tears stood in his eyes.

All the boys came run-ning up, and ev-er-y one had some-thing to say. One of them whis-pered to the oth-ers and said :

"Now, fel-lows, we shall see wheth-er Dun-can can make up a fib as well as the rest of us."

"Not he!" said lit-tle Thom-as Pool-ey, who was Dun-can's friend. "Not he! I'll war-rant

you, Dun-can will be as true as gold."

John Jones step-ped up, and tak-ing the cat by the tail, said: "Here, boys, I'll just fling her in-to the al-ley, and we can tell Mr. Cole that the butch-er's dog killed her; you know he wor-ried her last week."

Sev-er-al of them thought this would do ver-y well. But Dun-can looked quite an-gry. His face swelled, and his cheeks grew red-der than be-fore.

"No!" said he, "no! Do you think I would *lie* for such a crea-ture as that? It would be a *lie*, a LIE, a LIE!"

And ev-er-y time he said the word, his voice grew loud-er and loud-er.

Then he picked up the poor thing in his arms, and car-ried it in-to the school-room, and the boys fol-lowed to see what would hap-pen.

The mas-ter looked up, and said: "What is this? My faith-ful mous-er dead! Who could have done me such an in-ju-ry?"

All were si-lent for a lit-tle

while. As soon as Dun-can could get his voice, he said:

"Mr. Cole, I am ver-y sor-ry—but here is the truth. I can't lie, sir; I killed Tab-by. But I am ver-y sor-ry for it. I ought to have been more care-ful, for I saw her rub-bing her side a-against the log. I am ver-y sor-ry, in-deed, sir."

Ev-er-y one ex-pect-ed Mr. Cole to take down his long rat-an. But he put on a pleas-ant smile, and said:

"Dun-can, you are a brave boy! I saw and heard all that passed from my win-dow a-bove. I would rath-er lose a hund-red cats than miss such an ex-am-ple of truth and hon-or in my school.

"Your best re-ward is what you now feel in your own con-science; but I beg you to ac-cept this hand-some pen-knife, as a to-ken of my ap-pro-ba-tion."

Dun-can took out his hand-ker-chief and wiped his eyes.

The boys could no long-er re-strain them-selves; and when Thom-as Pool-ey cried, "Three cheers for True Dun-can!" all joined in a heart-y hur-ra.

The teach-er then said: "My boys, I am glad you know what is right, and that you ap-prove it; though I am afraid some of you could not have done it.

"Learn from this time that noth-ing can make a false-hood ne-ces-sa-ry. Sup-pose Dun-can had tak-en your e-vil ad-vice, and had come to me with a lie; it would have been in-stant-ly de-tect-ed, for I was a wit-ness of what passed.

"I trust he has been gov-erned in this by a sense of right, and I ex-hort you all to fol-low his ex-am-ple."—*Selected.*

#### AUNT ELIZA'S STORIES,—No. X.

##### THE HAPPY DAY.

ONE cold day in winter Clin-ton Ross and his brother Frank were playing mer-rily with their sled; now riding swiftly down the hill, and now drawing each other over the smooth white snow.

To be sure the air was pretty keen, and the snow cracked and groaned beneath their feet, but a merry heart and a bounding step send the warm blood rapidly over the frame, and the boys, wrapped in their warm coats and tippets, hardly felt the sharp, biting air.

Pretty soon a little girl with tattered clothes and feet almost bare passed by, and as she saw the rosy cheeks and heard the ringing laugh of the happy boys



she paused a moment to look at them, though she shivered while she did so.

But Clinton saw her blue and trembling lips, and he knew she suffered from the cold. "Only look at that little girl, Frank," said he; "she will freeze without more clothing."

"Oh, yes," said Frank; "and see her feet. Poor thing! what can we do for her?"

Clinton went toward her and said, "Little girl, why do you not stay at home such a cold day?"

"I went out to get something for my mother to eat, for she is very sick," replied she, holding up a little basket with a piece of bread in it.

"My mother would give you food and clothes too, if you were there," said Frank, "for she is a real good mother, and I know you would love her."

"But I must hurry home, for I am very cold," said the child.

The boys talked together a moment, and then Clinton said, "If you will get on my sled we will take you to our home, where you can have food and clothing."

A tear trembled in the blue eye of the girl, and she said, "My mother will bless you, kind little boys."

Mrs. Ross was very much surprised as the boys stopped at

the door with the little girl on their sled and helped her off with as much care and politeness as if she had been a child of Queen Victoria.

Mrs. Ross remembered that the dear Saviour has said, "Feed my lambs," and when the boys told their story, she said they had done just right. She placed a chair by the warm fire for the timid little girl.

It was but a few moments before good clothing was provided for the child, for Ellen Ross was very willing to give little Laura a part of hers. A large basket of food was prepared, and the boys, with their mother, went with Laura to her home.

They found her mother, Mrs. Ashman, very ill and in want of many things. She was very thankful for the kindness of Mrs. Ross and her children, and told them that though she could not reward them they would be richly rewarded by their Father in heaven.

On their way home they told the kind Dr. Wells of Mrs. Ashman's illness, and he went to visit her.

Mr. Ross sent her a load of wood, and gave her more clothing and food, so that the poor sick woman and her child were more comfortable that day than

they had been for a long time before.

That evening Frank and Clinton were sitting by the table with their sister Ellen, when Clinton said, "I wonder what has made the day seem so short. It hardly seems like a whole day."

"Yes," said Frank, "and it has been so pleasant too. I do not believe any thing has gone wrong to-day."

Their mother smiled and said, "Then my little boys have been very happy and yet can not tell why. Have they been very good?"

"Oh, yes, mother," said Ellen, "they were good to little Laura, and I guess that is what makes them so happy."

"You are right, Ellen," said her mother. "The Bible tells us 'He that giveth to the poor lendeth to the Lord, and that which he hath will He surely repay him,' and I think you are repaid already, my children."

"Remember that goodness is the only way to happiness, and that he who does a kind act will find that his own feelings will repay him, but he who commits a sinful deed will feel that there is, indeed, 'no peace to the wicked.'"

### WORK AND PLAY.

WORK while you work,  
Play while you play,  
That is the way  
To be cheerful and gay.

All that you do,  
Do with your might;  
Things done by halves  
Are never done right.

One thing each time,  
And that done well,  
Is a very good rule,  
As many can tell.

Moments are useless  
Trifled away;  
So work while you work,  
Play while you play.

*Selected.*

### WINTER SONG.

'Tis winter still, and still the blast  
Howls through the forest loud;  
Still on the gale comes driving fast,  
In flakes, the snowy shroud.

The sheep and cattle shivering stand  
Around the barn-yard gate,  
And wishful at the farmer's hand  
Their coming meal await.

The dog sits howling at the door,  
And begs you'll let him in;  
Jack Frost, alas! bites very sore,  
And Pincher's boots are thin.

The geese sit gathered in a crowd,  
And each one hides his head;  
The squealing pigs do cry aloud,  
Though they have just been fed.

The boys and girls to school that go,  
In caps and mittens run;  
With noses red, they spurn the snow,  
And have a deal of fun.

*Selected.*



## WINTER SPORTS.

MARY, come here and see this picture of boys and girls at play. Some of the boys are riding down hill on their little sleighs, and several others are skating on the smooth ice."

"Emma, I see the boys at play, but I should like to know what those two girls on the piazza are doing."

"They are playing shuttle-cork, Mary. That ball between them, which you see one of the girls about to strike, is made of cork, with feathers stuck in it."

"But, Emma, what is that which the girls hold in their hands?"

"That is called a battle-door, Mary. It is a thin board with a handle, so as to be convenient for holding. One end is left flat and wide with which to strike the ball of cork.

"Sometimes the large end of the battle-door is made like a hoop, with some kind of leather stretched over it. This is better

than the board for striking the shuttle-cork.

"One of those little girls strikes the ball with her battle-door and drives it from her, and the other girl hits it and drives it back again.

"In this way they keep the ball moving back and forth as long as they can without its falling upon the floor."

"Oh, Emma, I should like that play; it must be sport, and then it is such good exercise."

"Yes, it is sport and good exercise for girls, but I dare say the boys would much rather ride down hill, or skate on the ice.

"Do see that little boy tugging to pull his sled up the hill, and see those two who are seated on their sled, and have just started down again?"

"One of them has lost his hat, but he does not seem to mind that. How happy they are."

"Boys in the country have rare sport when there is snow on the ground."

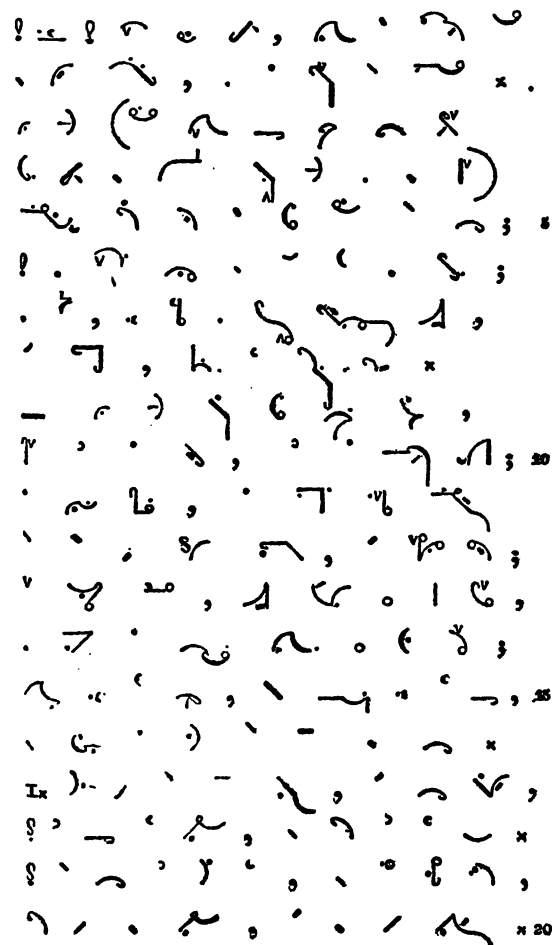
## Phonography.—Lesson 10.

## PUNCTUATION.

In punctuation the same marks are used as in ordinary writing, with the exception of the period, for which a small cross is used, thus x and the exclamation, thus !. A capital letter is represented by two short parallel lines placed under the beginning of a word. An emphatic word is marked by a horizontal line drawn below it.

## POPE'S ESSAY ON MAN.

## EPISTLE I.



The interrogation and exclamation points are placed at the beginning of the sentence to which they belong, in phonography. The reason given for this is, that the pupil may know what inflection is required when he commences reading the sentence. They are usually placed both at the beginning and end.

The Arabic numerals, or figures, are written the same in phonography as elsewhere.

In acquiring a knowledge of Phonography the student will find it very beneficial to practice reading it, as thereby he soon becomes familiar with the characters and forms of words; hence can write it with greater facility. For the purpose of affording such practice we commence, in the present number, a lesson with "Pope's Essay on Man," printed in phonography. This will be continued in future numbers.

## HINTS FOR WRITING.

Phonography affords a great variety in the forms of words, and often the choice of which to use may be directed by principles, and these ought not to be neglected. Sometimes the taste alone may be consulted. Acute angles are more easily made than obtuse ones. A full form, one which can be made without lifting the pen, should be preferred to a more contracted one, which requires the pen to be raised. The most contracted is not always the easiest form. Those should be chosen which can readily be vocalized.

It is better for the hand to proceed forward in writing, than to move backward.

In combining consonant-signs, a straight-line-sign is repeated by making it twice the length of a single-sign, but a half-length consonant-sign must not be joined to a full one, unless at an angle.

## Exchange Department.

### DRAWING AND WRITING.

HON. HORACE MANN, late Superintendent of Massachusetts Schools, says, in a report of a visit to the schools of Europe:

"Such excellent handwriting as I saw in the Prussian schools I never saw before. I can hardly express myself too strongly on this point. In Great Britain, France, or in our own country, I have never seen schools worthy to be compared with theirs in this respect. This superiority can not be attributed in any degree to a better mode of holding the pen; for I never saw so great a proportion of cases in any schools where the pen is so awkwardly held.

"This excellence must be referred, in a great degree, to the universal practice of learning to draw contemporaneously with learning to write.

"I believe a child will learn both to draw and write with more ease than he will learn writing alone. In the course of my tour I passed from countries where almost every pupil in every school could draw with ease, and most of them with no inconsiderable degree of beauty and expression, to those where drawing was not practiced at all; and I came to the conclusion that, with no other guides but the copy-books of the pupils, I could tell whether drawing was taught in schools or not."

### NOTICES OF EXCHANGES.

ANOTHER package of drawings and paintings has recently been received from the pupils attending Mr. J. M. Horton's school, at North Castle, N. Y.

Miss Mary Purdy, aged 15, sent several beautiful specimens of painting; Sarah A. Merritt, 12, sent paintings, maps, and drawings; Maria L. Capron, 12, sent one painting and several drawings; Frances Brundage, 12, sent one painting and some drawings; Mariett Fisher, 18, drawings; Mariett Brundage, 12, sent a map and drawings; Sarah E. Gale, 11, sent drawings; Free love B. Green, 12, drawing; Deborah L. Green, drawing; Elma Williams, 9, drawings; Elijah C. Fisher, 16, drawing; Lewis S. Onderdonk, 18, maps and drawings; James Hoodless, 16, maps and drawings with the pen; Evander Purdy, 12, painting and drawings; Casper C. Odell, 10, drawing; S. W. M. Chattaway, 8, drawings; George Post, 11, drawing.

These pupils are making much improvement in drawing and painting, yet others may do the

same if they will but practice it as perseveringly. The studies of the school are not neglected for this pleasing employment; indeed, we believe that the drawings are almost entirely executed out of the school hours. The advantage resulting from this is not confined to drawing alone, for a recent visit to the school confirmed us in the opinion that it is aiding much in preparing good writers. Success to you and your pupils, friend Horton.

Drawings received from Henniker, N. H.—Mary Emily Bell, aged 13; Mary E. Pollard, 13; Ermina H. Pollard, 13; E. L. Pollard. We are happy to see that improvement in drawing has been made by those whose names we have given here. Persevere, with care, and you will make still greater advancement.

From Abby M. Jones, aged 18, Newfield, Tompkins Co., N. Y., we have received a drawing and leaf impressions. In her letter which accompanied these she says: "We have taken The Student three years, but I have no thought of stopping it—I like it too well for that."

From the pupils of Mrs. Moase, Astoria, L. Island, we have recently received some paintings: Charles A. Halsey, aged 13; Stephen B. Halsey, 11.

### QUERIES.

#### MATHEMATICAL.

1. A LADY purchased a gold ring at the rate of \$20 per ounce; she paid for the ring \$1 25; how much did it weigh?

2. Trinity Church, in New York, has eight bells; how many chimes can be rung upon them?

3. A tract of land is to be laid out in the form of an equal square, and to be inclosed with a post and rail fence, five rails high, so that each rod of fence shall contain five rails. How large must said square be to contain just as many acres as there are rails that inclose it?

#### HISTORICAL.

1. To what cause may the decline and fall of Athens be ascribed?

2. What were the prominent causes of the American Revolution?

#### ANSWERS TO QUERIES.

H. R. sends us answers to the first and last mathematical problem. Ans. to the first—A had 5 guineas, and B had 7. Ans. to the third—120.

No answer has been sent us for the second problem yet.

## Editor's Table.

### SCHOOL VISITATIONS.—NO. II.

THE District School taught by Mr. J. M. Horton, at North Castle, Westchester Co., N. Y., is attended by about fifty pupils, from the ages of five to sixteen or eighteen. The exercises are regulated by a programme, assigning a certain time to each study and recitation. At ten minutes before nine o'clock in the morning the school is opened by the reading of the Bible. At nine an *exercise on topics* commences, and continues ten minutes. This is conducted by the teacher in familiar descriptions, illustrations, and explanations of a particular subject. For instance: one morning "Punctuality" will be the subject considered; on the next day it may be "Politeness;" then, perhaps, "The influence of the Bible;" on another occasion, "Water, its uses, etc.;" then, the "Effects of idleness;" and so on, embracing, among many others equally interesting, the following topics, viz.:

Language, its origin, etc.; metals, where obtained, their uses; camphor; philosophy of rain; the five senses; neatness; tea and coffee, where and how obtained; the manufacture of needles and pins; the moon; eclipses; heat; the thermometer; ice, snow, and frost; furs of animals; sponge; flax and linen; sugar; leather; national emblems, flags, etc.; uses of oak and pine, etc., etc.

The object of this *topic exercise* is two-fold: first, to so interest the pupils that they will always be prompt at the opening of the school; and, second, to impart to them useful, general information, embracing a much wider range than the studies which they may be pursuing, and thereby stimulate them to study and read, that they may learn more on these subjects.

On a Monday morning suppose the subject of "Spices" be taken up. The teacher will tell where they are found, how they grow, by what means they are obtained and prepared for market, then how conveyed to different countries, their nature, uses, etc. This is done in a familiar manner, and great care is taken that all are interested and made familiar with the location of places, by pointing them out on maps suspended before the school. This will occupy ten minutes for that day; but on Tuesday morning the topic exercise commences by a re-

view of the subject of the previous morning. The pupils are now questioned by the teacher, and they in turn are allowed to question him, and thus the subject becomes well understood, and so fixed in the minds of the pupils that it will not easily be forgotten.

After this review is finished, if time permits, another subject, perhaps camphor, will be explained by the teacher, as was that of spices on the previous day. Then a review of this will follow on the next morning, and so on, for each day of school. If a subject be sufficiently interesting, the time for two or even three of these topic exercises may be devoted to it, and one morning spent in the review, and a new subject taken up on the succeeding day.

Such an exercise, properly conducted, can not fail of being highly useful, and an almost invaluable auxiliary in awakening a love for learning in the minds of children. How vastly superior is such a plan, by which the punctuality of the pupils is secured and time saved, to that so common, where the scholars are continually arriving at the school during the first half hour after the opening exercise in the morning. Under such an arrangement as the one above described the children are acquiring habits which will prove a blessing to them through life, besides the expanding of their minds by furnishing them with a wide scope of interesting and important information.

Mr. Horton has also another very important and useful practice. The first *twenty* minutes, on opening school in the afternoon, is spent in what is called a *general exercise*. This consists, for the most part, in practical applications of their studies. For instance: one day the whole school, which is divided into classes, according to their attainments, is required to practice arithmetic. The teacher forms and gives questions of a practical nature to each of the classes, the pupils being left to determine for themselves by what rule to solve them. When the answers are obtained it is designated by raising slates or hands, and the teacher examines the work to see if all is right. Sometimes, if the question be difficult, the teacher explains it from the blackboard. Other questions are then given, solved in a like manner, and so on till the time allotted to the exercise expires, when the usual recitations and study commence.

On another day this general exercise will be

devoted to a lecture on history by the teacher; at another time to the vowel sounds of the English language; then the consonant sounds. Sometimes a useful and interesting selection from some newspaper or book will be read by the teacher; and on certain days this time is devoted to reading compositions and declamations. Here, too, is a practical application of instruction made, which must not only interest, but greatly benefit the minds of the pupils. Far superior must be the value of such teaching to that of a humdrum routine of mere book knowledge, where the teacher seems perfectly satisfied if he asks the printed questions, and the pupils learn what the book contains.

Our visit to Mr. Horton's school, which is situated about thirty miles from this city, afforded us much satisfaction, and we hope our notes may furnish hints which shall cause other teachers to become more practical in their instruction, and enable them to make their schools more interesting and useful.

#### NOTICES OF PUBLICATIONS.

**THE WORKS OF WILLIAM COWPER; his Life, Letters, and Poems, with his Private Correspondence.** Edited by Rev. T. S. Grimshawe, A.M., M.R.S.L. With illustrations. Large octavo; 750 pages. Published by Robert Carter & Brothers, 285 Broadway, New York.

The above work is neatly printed on excellent paper, and beautifully illustrated. It contains a portrait of William Cowper, said to be the most correct likeness of him ever given to the public. We believe this to be the best edition of Cowper's Works ever published in this country.

The late Robert Hall says, "The letters of Mr. Cowper are the finest specimens of the epistolary style in our language;" and no person who has ever had the pleasure of perusing them will question the justness of that remark. He has a happy faculty of being gay without levity and grave without dullness, and also of interweaving the sportiveness of wit with the gravity of a moral. While he interests his readers he never forgets the appeal to their hearts and conscience, and none can read his writings without feeling that they may derive therefrom something far more substantial and useful to the mind than from the light modern literature which floods the land. Cowper is our favorite poet, and we wish his works were in every library, and read by every youth.

**DOMESTIC HISTORY OF THE AMERICAN REVOLUTION.** By Mrs. Ellet, author of "The Women of the American Revolution." 12mo; pp. 308. Published by Baker and Scribner, 145 Nassau Street, New York, 1850.

This work is written in an easy and pleasing style, and unfolds many interesting incidents of our Revolutionary struggles which have never been brought before the public until now. As its title purports, it is a history of the domestic scenes and condition of the times rather than

of men and public acts. It is indeed a valuable addition to our national history, and deserving a place in every school library. All who cherish our noble institutions, and the memory of those struggles by which they were established, can not fail of being deeply interested in the perusal of Mrs. Ellet's Domestic History of the American Revolution.

**AMERICAN PRACTICAL MECHANICS' POCKET-BOOK AND ALMANAC; or, The Scientific Year Book of Facts, for the year 1851.** By J. L. Kingsley and A. Longbottom. 16mo; pp. 120. Price 25 cents bound in paper, and mailable; 50 cents bound in leather, pocket-book form. Published annually by Kingsley and Longbottom, 235 Broadway, New York.

This volume is literally *multum in parvo*, and contains much interesting and valuable information for mechanics of every class. It is worth double its price to any person. By forwarding twenty-five cents in a letter, post paid, to the publisher, it may be obtained at any post-office in the United States.

**POPULAR EDUCATION; for the Use of Parents and Teachers, and for Young Persons of both sexes.** Prepared and published in accordance with a resolution of the Senate and House of Representatives of the State of Michigan. By Ira Mayhew, A.M. 12mo; pp. 467. Published by Harper & Brothers, 82 Cliff Street, New York, 1850.

This work would do much good if read by parents and teachers. It presents much useful information and many valuable facts and suggestions in regard to education. By a popular education the author does not mean a superficial one, but such as fully develops the whole man, physically, morally, and intellectually.

**THE YOUNG PUPIL'S MENTAL AND WRITTEN ARITHMETIC,** designed as an introduction to the more advanced works in general use. Published by Pratt, Woodford, & Co., 4 Cortlandt Street, New York, 1850.

This work combines, in a practical manner, mental and written arithmetic, furnishing a collection of mental questions, together with a large number of operations to be performed on the slate. The progression from simple to more difficult questions is so gradual, that each principle is made perfectly familiar by practice before a new one is introduced; hence it is admirably adapted for beginners in the science of numbers, and well fitted to precede the works in general use.

**HARPER'S NEW MONTHLY MAGAZINE,** for January, presents its usual amount of attractiveness. Terms \$3 a year, in advance. Harper & Brothers, publishers, New York.

**THE INTERNATIONAL MONTHLY MAGAZINE,** published by Stringer and Townsend, 222 Broadway, New York. Terms \$3 a year, in advance.

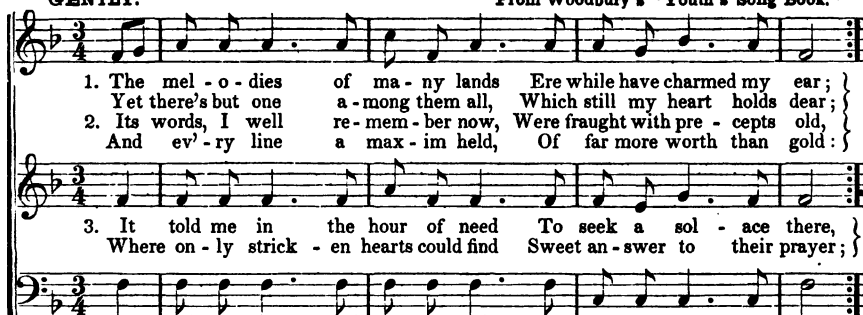
This magazine for January surpasses all former numbers in its beauty, neatness of execution, illustrations, and even in literary matter. It is a valuable contribution to the periodical world.

**THE ILLUSTRATED DOMESTIC BIBLE.** This work continues, each number sustaining the reputation of the first, for quality of paper, beauty of illustrations, and practical arrangement. It is admirably adapted for a family Bible. Published, in semi-monthly parts, at 25 cents each, to be completed in twenty-five numbers, by Samuel Hueston, 139 Nassau Street, New York.


## THE SONG MY MOTHER SINGS.

GENTLY.

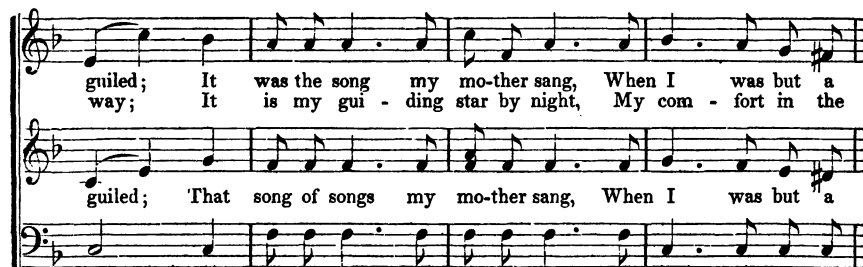
From Woodbury's "Youth's Song Book."



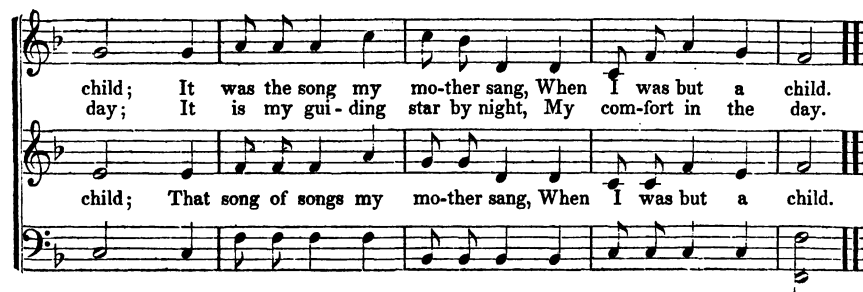
1. The mel-o-dies of ma-ny lands Ere while have charmed my ear;  
 Yet there's but one a-mong them all, Which still my heart holds dear;  
 2. Its words, I well re-mem-ber now, Were fraught with pre-cepts old,  
 And ev'-ry line a max-im held, Of far more worth than gold;  
 3. It told me in the hour of need To seek a sol-ace there,  
 Where on-ly strick-en hearts could find Sweet an-swer to their prayer;



I heard it first from lips I loved, My tears it then be-  
 A les-son'twas, though sim-ply taught, That can-not pass a-  
 Ah! much I owe that gen-tle voice, Whose words my tears be-



guiled; It was the song my mo-ther sang, When I was but a  
 way; It is my gui-ding star by night, My com-fort in the  
 guiled; That song of songs my mo-ther sang, When I was but a



child; It was the song my mo-ther sang, When I was but a child.  
 day; It is my gui-ding star by night, My com-fort in the day.  
 child; That song of songs my mo-ther sang, When I was but a child.



## HOME PREPARATIONS FOR SCHOOL.

We commend the following extract from an article, in "The Massachusetts Teacher," to the careful attention of teachers and parents. Its suggestions are invaluable.—Edn.

A good education, the proper cultivation of the intellectual powers, consists not so much in the amount of knowledge acquired, as in the ability to acquire knowledge; not so much in the ability to receive instruction from the lips of another, as in the ability to investigate truth for one's self; not in having difficulties made easy and taken clean out of the way, but in removing them by one's own effort. Such being the design of learning lessons, it is obvious that lessons learned at home are ordinarily much more valuable than lessons learned at school.

How are lessons commonly learned at school?

The pupil sits down to his task which is to be recited at a given time. He meets with a difficulty—a little time is spent upon it, and if he can not pretty readily solve it, he applies to his teacher for help, or obtains permission to speak to another in whose power he has more confidence than in his own. He would often study longer by himself, but time passes, and if he waits, the lesson will not be ready in season for recitation. Or, it may be, he passes over with little study the more difficult parts of the lesson, learning only the easier, and depending upon help from the teacher at time of recitation, which is near at hand. Even if the lesson is well learned, the pupil passes directly from the book to the recitation.

Contrast this with the manner of learning the lesson at home. It is conned over in the evening; if difficulties occur, they become the subject of careful and deliberate thought. Again and again does he return to his task; it is among the last thoughts before he sleeps, and among the first when he wakes. And he soon learns by experience that difficulties which careful and patient study seem not to remove in the evening, do, frequently, after such evening study, vanish with the night; what was dark, or dimly seen the previous evening, is now bright as the rising sun. Such an exercise begets strength—strength of intellect; strength of purpose; confidence in one's own powers; and an independence of the aid of others, which he seldom feels whose study hours are confined to the school-room. Is not the pupil's education very much more advanced by such home study than by lessons ordinarily learned at school?

Let us suppose a school term to consist of twelve weeks, and that one such lesson is learned per day, making seventy-two lessons in the term. What a stride has the pupil taken in his education, which he has not begun to take whose studies have been confined to the school-room. Not only has he learned these seventy-two lessons, but his mind has been more cultivated by the exercise than it would be by learning twice seventy-two lessons in the school-room. Nor is this all. His progress in study in school to-day is all the easier and the more rapid and pleasant in consequence of the exercise of the last evening. Moreover, each successive evening lesson becomes easier as the mind acquires strength by such

deliberate and patient study. Longer tasks are cheerfully undertaken and learned. \* \* \*

We all frequently say to our pupils that their education is but begun at school; that all that can be done is to lay the foundation for an education; the erecting of superstructure must be the work of a life. We would teach them that the education acquired while at school is by no means complete. If they would be highly useful, they must continue, at home, the studies which have been commenced at school. They must choose for their literary companions, not the novelist, and the miserable scribblers of the light literature of the day, which are taken as the only companions of so many of our youth on leaving the school-room; but they must select the works of men and women who have thought much, whose minds have been disciplined by study; whose writings can be appreciated only by minds disciplined by study, which, indeed, will be read by few whose minds have not been accustomed to study.

But will the youth who has been taught by long years of training that school-books, books that require study, are for the school-room only—whose fireside associates and home companions have been confined to the light literature just referred to—will such a youth, after leaving school, undertake a course of reading which will require vigorous, independent, manly thought, and hard labor? It should never be forgotten by the teacher or the parent, that "man is a bundle of habits;" that the habits he forms during his school-days, are more important than any amount of knowledge he may there acquire.

Let then the youth early learn to study his book at home; and, during his whole pupilage, let him not, for a single day, be excused from the labor of preparing some exercise at the fireside. We may then hope that when he leaves school, he will not utterly forsake his studies; that, in his future intercourse with books, he will not be confined to those of a light and frivolous character; but that from choice, as well as from a sense of duty, he will cultivate the acquaintance of authors whose works are adapted to perfect the mental and moral training already so happily commenced.

The healthful moral influence of such evening exercises deserves a passing notice. The mind of youth is ever active. If not employed upon one thing it will be upon some other. If suitable employment be not provided for it, it will almost certainly seek employments which are unsuitable and degrading. How are our youth exposed to temptation, in consequence of having nothing at home to occupy and interest them? Whatever, therefore, we can do to furnish them with such occupation, especially whatever we do to form in them habits of home-study, and a love for substantial literature, is so much done to save them from the snare of him who

"Ands some mischief still,  
For idle hands do do."

How many a victim to vicious habits might have been saved to his family and friends, and to society, if suitable employment had, in his youthful days, been provided for him by his parents and teachers. \* \* \*

# THE STUDENT.

## THE YOUNG MAN'S COUNSELOR.

**M**OVE with the multitude in the common walks of life, and you will be unnoticed in the throng; but break from them, pursue a different path, and every eye, perhaps with reproach, will be turned toward you. What is the rule to be observed in general conduct? Conform to every innocent custom as our social nature requires, but refuse compliance with whatever is inconsistent with propriety, decency, and the moral duties; and dare to be singular in honor and virtue.

In conversation, truth does not require you to utter all your thoughts, yet it forbids you to speak in opposition to them. To open the mind to unreserved communication is imbecility; to cover it with a veil, to dis sever its internal workings from its external manifestations, is dissimulation and falsehood. The concordance of the thoughts, words, and deeds is the essence of truth, and the ornament of character.

A man who has an opportunity to ruin a rival, with whom he is at enmity, without public dishonor, and yet generously forbears, nay, converts the opportunity into a disinterested benefit, evinces a noble instance of virtuous magnanimity. He conquers his own enmity, the most glorious of all conquests, and overcomes the enmity of a rival by the most heroic and praiseworthy mode of retaliation. \* \* \*

As a rill from a fountain increases as it flows, rises into a stream, swells into a river, so, symbolically, are the origin and course of a good name. At first its beginning is small: it takes its rise from home, its natural source, extends to the neighborhood, stretches through the community, and finally takes a range proportioned to the qualities by which it is supported—its talents, virtue, and usefulness, the surest basis of an honorable reputation.

The relatives and kindred of a young man, by a natural process, communicate his amiable and opening character to a wider circle than that of home. His associates and friends extend the circle, and thus it widens till its circumference embraces a portion more or less of society, and his character places him in the class of respectable men. With good principles and conduct neither envy nor malice can intercept the result of this progressive series; without good principles and conduct no art or dissimulation can realize the noblest aim of a social being—a well-founded reputation.

A person commits an error, and he has sufficient address to conceal it, or sufficient ingenuity to palliate it, but he does neither; instead of availing himself of concealment and palliation, with the candor of a great mind he confesses his error, and makes all the apology or atonement which the occasion requires. None has a title to true honor but he who can say with moral elevation, when truth demands the acknowledgment, I have done wrong.

The events of life are not fortunate or calamitous so much in themselves as they are in their effect on our feelings. An event which is met by one with equanimity or indifference will fret another with vexation or overwhelm him with sorrow. Misfortunes encountered with a composed and firm resolution almost cease to be evils; it is, therefore, less our wisdom to endeavor to control external events than to regulate the habitual temper of our minds to endurance and resignation.

The emotions of the mind are displayed in the movements of the body, the expression of the features, and the tones of the voice. It is more difficult to disguise the tones of the voice than any other external manifestation of internal feeling. The

changing accents of the voice of those with whom we have long lived in intimate intercourse, in the communication of sentiment, are less equivocal and more impressive than even language itself.

The vocal sounds of speech, expressive of thought and feeling, are too much neglected by us in our individual and personal education. Could we analyze the opinion which we form of people on a first acquaintance, we should certainly find that it is greatly influenced by the tones of the voice. Study, then, agreeable sounds of speech, but seek not rules to guide you from etiquette—from artificial politeness; descend into the heart, there cherish the kind and moral sympathies, and speech will be modulated by the sincere and endearing tone of benevolence. \* \* \*

Some, when they move from the common routine of life, and especially on any emergency, are embarrassed, perplexed, and know not how to resolve with decision and act with promptitude. Presence of mind is a valuable quality, and essential to active life; it is the effect of habit, and the formation of habit is facilitated by rule.

Command your feelings, for strong feelings disconcert the mind and produce confusion of ideas. On every occasion that requires attention learn to concentrate your thoughts with quickness and comprehension. These two rules reduced into habits, if steadily practiced, will induce decision of resolve and promptitude of action.

Precipitation spoils the best concerted plan; perseverance brings the most difficult, when it is practicable, to a successful result. The flutter of haste is characteristic of a weak mind that has not the command of its thoughts; a strong mind, master of itself, possesses the clearness and prescience of reflection.

In learning, concentrate the energy of the mind principally on one study. The attention divided among many studies is weakened by the division; besides, it is not granted to an individual to excel in many things. But, while one study claims your main attention, make occasional excursions into the fields of literature and science, and collect materials for the im-

provement of your mind and the advancement of your favorite pursuit.

Excellence in a profession, and success in business, can be attained only by persevering industry. None who thinks himself above his vocation can succeed in it, for we can not give our attention to what our self-importance despises. None can be eminent in his vocation who devotes his mental energy to a pursuit foreign to it, for, in such a case, success in what we love is failure in what we neglect.

Among men, you must either speak what is agreeable to their humor or what is consistent with truth and good morals. Make it a general rule of conduct neither to flatter virtue nor exasperate folly; by flattering virtue you can not confirm it, by exasperating folly you can not reform it. Submit, however, to no compromise with truth, but, when it allows, accommodate yourself with honest courtesy to the prepossessions of others.

In your whole behavior to mankind, conduct yourself with fairness and integrity. If an action is well received you will have the credit it deserves; if it is not well received you will have the approval of your own mind. The approval of a good conscience is preferable to the applause of the world.

Form no resolution, and engage in no undertaking, which you can not invoke Heaven to sanction. A good man prays the Almighty to be propitious to his virtuous plans; if his petition is denied he knows it is denied in mercy, and he is resigned; if it is granted he is grateful, and enjoys the blessings with moderation. \* \*

—Selected.

THE pen—in a hand that knows how to use it—is the most powerful weapon known. As the tongue of the absent, how cheering! When the golden tints of virtue guide it, how beautiful! Where self-respect gives it a new vigor, how pleasing! Where honor directs it, how respected! Where wit sharpens it, how fatal! When scurrility wields it, how contemptible! To the weapon of the soul.



"FANNY FORRESTER."

**F**MILY E. CHUBBUCK was born in the town of Morrisville, Madison County, N. Y. Her parents were in humble circumstances. She early imbibed a love for learning, and eagerly sought the improvement of her mind during her leisure moments. While yet young in years she assumed the responsibilities of a teacher.

Miss Chubbuck first became known to the public as a teacher of a female seminary at Utica, N. Y., in which station she maintained the reputation of a diligent and kind instructor, and was much respected and beloved. While thus employed she began her literary career by furnishing articles for several newspapers and magazines.

It was in 1844 that she commenced writing for the "New Mirror," in New York, then conducted by N. P. Willis. Her articles were published with the signature of "Fanny Forrester," by which name she became so universally known. Such was their popularity that they were copied far and wide, and the author at once assumed a high rank among the magazine writers of the day.

In all of her writings she was prompted by a noble motive—that of doing good, while she was providing for a mother who was in some measure dependent upon her care. This idea was more grateful to the young maiden than the plaudits of the world. Thousands who have perused those life-like tales contained in her "Alderbrook," and felt the better for reading them, know how well she accomplished

her aim. This truly gifted writer continued the use of her pen in this pleasing manner until she was called to another field of usefulness.

In 1846 Dr. Judson returned from Birmah to America, and was soon after introduced to Miss Chubbuck as a suitable person to write a memoir of his late companion, Mrs. Sarah B. Judson. She cheerfully undertook the work, and being necessarily in the company of each other much of the time, a mutual affection ripened between them. When the time came for Dr. Judson to return to the land of his labors, the favored child of literature consented to accompany him as a companion and helper.

They were married at Hamilton, N. Y., on the 2d of June, 1846, and soon afterward sailed for Maulmain, Birmah, the land of their future labors, as missionaries; where they arrived in safety, after passing through various trials. Last April Mr. Judson died. His wife, with one little daughter, are still at Maulmain, but it is supposed that she will ere long return to America.

In closing this sketch of that gifted one for whom many hearts are wafting upward the sacred desire that she may yet long be spared, we can not find language more appropriate than her own farewell words on leaving "Alderbrook"—the name given in her writings to her native village.

"I stand on the verge of the brook which seems to me more beautiful than any other brook on earth, and take my last survey of the home of my infancy. The cloud which has been hovering above the trees on the verge of heaven, opens; the golden light gushes forth, bathing the hill-top, and streaming down its green declivity, even to my feet; and I accept the encouraging omen. The angel of Alderbrook, 'the ministering spirit,' sent hither by the Almighty, blesses me. Father in heaven, Thy blessing ere I go!

"Hopes full of glory, and oh, most sweetly sacred! look out upon me from the future; but, for a moment, their beauty is clouded. My heart is heavy with sorrow. The cup at my lip is very bitter. Heaven help me! White hairs are bending in submissive grief, and age-dimmed

eyes are made dimmer by the gathering of tears. Young spirits have lost their joyousness, young lips forget to smile, and bounding hearts and bounding feet are stilled.

"O the rending of ties, knitted at the first opening of the infant eye, and strengthened by numberless acts of love, is a sorrowful thing! To make the grave the only door to a meeting with those in whose bosoms we nestled, in whose hearts we trusted long before we knew how precious was such love and trust, brings with it an overpowering weight of solemnity.

"But a grave is yawning for each one of us; and is it much to choose whether we sever the tie that binds us here to-day, or lie down on the morrow? Ah, the 'weaver's shuttle' is flying; the 'flower of grass' is withering; the span is almost measured; the tale nearly told; the dark valley is close before us—tread we with care!

"My mother, we may neither of us close the other's darkened eye, and fold the cold hands upon the bosom; we may neither of us watch the sod greening and withering above the other's ashes; but there are duties for us even more sacred than these. But a few steps, mother—difficult the path may be, but *very* bright—and then we put on the robe of immortality, and meet to part nevermore.

"And we shall not be apart even on earth. There is an electric chain passing from heart to heart through the throne of the Eternal, and we may keep its links all brightly burnished by the breath of prayer. Still pray for me, mother, as in days gone by. Thou bidst me go. The smile comes again to thy lip, and the light to thine eye, for thou hast pleasure in the sacrifice. Thy blessing! Farewell, my mother, and ye loved ones of the same hearth-stone! Bright, beautiful, dear Al-derbrook, farewell!

"FANNY FORRESTER."

THERE is a closer connection between good sense and good nature than is generally supposed.

Frequently review your conduct, and note your failings.

## PRESSED FLOWERS.

BY ABBY ALLIN.

WHAT do ye here, poor withered flowers,  
Frail relics of the past;  
The records of the joys, the griefs,  
Too bright, too sad, to last?

Fond memory's mystic monitors—  
I hear again the tone  
Of other days sweep o'er my soul,  
Telling of loved ones gone!

The tears are gathering as I gaze;  
The violet, the rose,  
The little wayside butter-cup,  
The humblest flower that grows!

Bright gentian from the grass-fringed brook,  
And lilies from the dell;  
Each bears a record, and my heart  
Acknowledgeth their spell.

Fair rose, thou bringest back the hour  
When Carrie was a bride;  
Her dark eye drooped, to veil the joy  
The conscious heart would hide.

Thou bringest back the gathered throng—  
Manhood, and maiden fair—  
The eager glance—the hum of praise—  
The hush—the vow—the prayer!

Pale lily, hast thou, too, a tale?  
Flower of the drooping head,  
Where is thy giver? what thy spell?  
Ask of the sleeping dead!

What is thy mission, butter-cup?  
Tell me, what hidden power  
Gains thee a place with the queenly rose?  
Thou art no courtly flower!

No courtly flower! yet many thanks  
For the pleasant hope ye gave;  
Flower of a mournful memory,  
Plucked from a father's grave!

Frail flowers, sweet symbols of the past,  
On every tiny leaf  
Is traced some memoir of an hour,  
Brimming with joy or grief.

Mute preachers! every flower and leaf  
Bids us to watch and pray,  
For soon some withered flower may tell,  
We, too, have passed away.

## Coats of Arms, or State Seals.—No. 11.



### NORTH CAROLINA.

**T**HE figures represented on the seal of the State of North Carolina are the goddess of *Liberty* on the left, and *Ceres*, the goddess of corn and harvest, on the right. Liberty is sitting, holding the Declaration of the American Independence in her hand, and supports her wand and cap. *Ceres* is represented as standing, holding in her right hand three heads of wheat, and in her left the *Cornucopia*, or horn of plenty, filled with the fruits of the earth.

North Carolina, one of the Southern states, is bounded north by Virginia, east by the Atlantic, south by the Atlantic, South Carolina, and Georgia, and west by South Carolina and Tennessee. Its extreme length from east to west is about 500 miles, and its greatest breadth from north to south about 180 miles, containing an area of 50,000 square miles.

The first settlement in this state is supposed to have been made about the year 1650, by families suffering from religious persecution in Virginia, who fled to North Carolina, and occupied that portion of the

state lying north of Albemarle Sound. This is said to have been the first state to pass resolutions in favor of the American independence.

The state is divided into seventy-four counties, and contains a population of 870,000, of whom more than 280,000 are slaves. The capital is Raleigh, situated near the central part of the state, about six miles from Neuse River. From 60 to 100 miles from the Atlantic the country is a low, sandy region, showing but little cultivation, yet it abounds in pitch-pine forests, and in some places the live oak grows readily.

One of the principal occupations of the inhabitants of this region is the collection of turpentine, and the manufacture of pitch, tar, and resin, which are produced in great quantities. The hilly region of the state, which bounds the sandy portion on the west, presents a more fertile soil, a change of climate and population. The productions of that portion lying west of the range of the Blue Hills, are those of the temperate regions, including wheat, grain,

potatoes, apples, peaches, and Indian corn. In other portions, tobacco, rice, and sweet potatoes abound.

North Carolina abounds in iron ore, and also contains some rich gold mines. The process of obtaining this precious metal is very laborious and expensive. In some places excavations have been made 120 feet deep. The stones are beaten to a fine dust, either by hammers, or by sledges moved by steam, and the mass is then placed in wooden troughs, called rockers, with a quantity of quicksilver. Then a small stream of water is made to flow in while the troughs are kept in gentle motion.

The quicksilver readily combines with the gold, when the united metals are taken out, pressed in a deerskin bag, through the pores of which the quicksilver is forced out, while the gold is left behind. The annual product of the gold from the mines of this state was once estimated at \$5,000,000 annually, but it is much less at present. At that time it was supposed that 20,000 men were employed in the mines.

The coast of North Carolina is lined with sand banks and islands, which render access to the bays and sounds extremely difficult. In consequence of this its commerce is carried on principally through the seaports of neighboring states. There are 250 miles of railroad, and about 20 miles of navigation by canal, in this state.

### OUR FIRST INSTITUTE.

BY C. MORLEY.

IT was during the time of the anti-rent troubles in our county\* that our first INSTITUTE was held. The personal efforts of our County Superintendent had induced some eighty teachers to come together at the shire town of our county, and there, while the bristling bayonets were glancing in the rays of the rising and setting sun, that company of devoted teachers assembled day after day to fit themselves more perfectly for their high vocation.

An anonymous hand furnished us with the following lines, peculiarly appropriate

\* Delaware, N. Y.

to our circumstances, and one evening, as the tone of the court-house bell died away, and the roll of the distant drum was borne feebly on the air, we sang them.

"We're gathered! we're gathered from mountain and glen;

We number fair women, and good honest men.

While the roll of the drum calls the soldier to duty,

The toll of the bell marshals science and beauty.

"There's a rustling of leaves with the wind in the mountains;

There's a dashing of spray as it sweeps o'er the fountains;

So rustle our hearts at the sound of the truth,  
And revive with those drops from the fountain of youth.

"We're gathered! we're gathered from mountain and glen;

We number fair women, and good honest men.

While the roll of the drum calls the soldier to duty,

The toll of the bell marshals science and beauty."

Another rallying song, written expressly for us by E. P. T. B. (now Mrs. Dr. Howard), was as follows:

#### FAIR SCIENCE BRIGHT.

(Air, Sparkling and Bright.)

"Fair Science bright, from realms of light,

We yield thee homage ever!

We're gathered here, a band sincere,

To ask thy smiles forever!

#### CHORUS.

"O! haste the day when thy gentle sway

To this wide earth be given,

And light may shine round thy hallowed shrine

Like a beam from the throne of Heaven!

"We have joined to raise for our ardent gaze,

The vail of thy hidden glory;

And, joyous, pore o'er ancient lore,

For heroes famed in story.

Chorus.—O! haste the day, etc.

"We sought to trace in endless space,

The path of worlds bright gleaming,

And hand in hand thy pages scanned,

Where heavenly truth is beaming.

Chorus.—O! haste the day, etc.

"And now we'll bear thy mandates fair  
To the youth that cluster round us ;  
And ever raise glad notes of praise  
For rich blessings that surround us.  
*Chorus.*—O! haste the day, etc."

Two weeks passed swiftly and pleasantly by. There was unity of thought and unity of feeling among us ; and after seemingly so short an acquaintance, the big tear swelled in many an eye as we joined in the parting strain, written by one of the teachers amid the cares of the Institute.

#### FAREWELL ODE.

Farewell ! We linger on the word  
That bids us sadly part ;  
And ever as its sound is heard,  
It echoes from the heart.  
We came to drink the crystal stream  
That flows from Science' spring,  
To catch the rapture of her beam,  
That joy to all doth bring.  
  
We love the teacher's glorious work ;  
It happiness conveys.  
Where'er the foes of virtue lurk,  
It pours its genial rays.  
The teacher's part—to train the mind ;  
To cultivate the thought ;  
And holy influences refined  
Pour round, with virtue fraught.  
  
O circle bright ! the teachers' band !  
We hail thee with delight ;  
Around thy steps on every hand  
We see fair Science' light.  
It lends a sunshine to the heart,  
All darkness to dispel ;  
And now, though duty bids us part,  
Sadly we breathe FAREWELL.

Five years have rolled round since. That "teachers' band" is scattered to the north, south, east, and west. Some sleep beneath the cold clods of the valley. Other Institutes have been called in the same place, and have met when the sentinel and bayonet had long disappeared ; yet none who took part with us then will ever wish to forget OUR FIRST INSTITUTE.

LEARNING refines and elevates the mind.

#### FAMILY CONVERSATION.

It is a duty that people owe to one another, to render their social intercourse productive of a mutual benefit. This, however, will never be, unless there is adopted in the family circle, where friends are in the habit of meeting, some regular plan which without fettering shall guide the conversation ; and which, while it gives an instructive tone, need not interfere with its discursiveness, or suitableness to all comprehensions.

Nothing would be more simple, and nothing productive of more lasting usefulness to this and succeeding generations. There are few families, in the present age of unprecedentedly cheap literature, without the means of commanding a supply of valuable and well-written books ; and it would not be very difficult for the elder members of the household to establish a rule, that every evening when gathered round the fireside, and not otherwise engaged in any important business, some book, or scientific discovery, or work of art, or historical event, should be calmly discussed by the entire circle.

It may be answered that there are many individuals of a family, who, from unfortunate defects of education, would not possess either the inclination or ability to join in such a discussion ; but this I think would tend to disclose the advantages of such a system. When such a person sees himself excluded from so much intellectual enjoyment ; when he finds himself, as it were, cut off from communion with other intellects, the deficiencies, of which he was until then careless, will sit heavily on him.

He will grow ashamed ; he will be humiliated ; and if it happens, as it will happen in nine cases out of ten, that he possesses any moderate share of pride or self-esteem, there is little doubt that he will set himself to work seriously to repair those mental defects, of whose existence he had before been scarcely conscious.

Moreover, such discussions need not be always confined to abstruse subjects. That would only make the circle pedants. A pedantic family is detestable. But music, painting, poetry, sculpture, biography, trav-



els, might all be taken in the round, and made to yield a profitable return.

Again, every member, however inexperienced or unlearned, should be heard with attention; for as there is no flower, however humble, from which the bee will not extract honey, there is no mind so unlimited or unenlightened from which we may not gather some fruit to be garnered in our memories. Nor does it follow that the topics introduced should always be treated profoundly, for a continual gravity would very soon put enjoyment out of the question.

It was Pitt, I think, who said, "I would not give a fig for a man who was not able to talk nonsense!" And the great statesman knew very well what he was saying, for it requires a positive amount of genius to talk nonsense well. A clever man will talk it for hours, and yet make it entertaining, perhaps instructive; and all the time his audience can see perfectly well that he could talk wisdom just as easily, if he chose.

There need be no necessity, then, for the debates I am recommending to be always wrapped in intense gravity. A subject should now and then be started which would admit of being treated in a volatile manner; and depend on it, a little clever light talk would enable the circle to return with renewed zest to profounder topics.

However, beyond all such things, I would advocate the fireside debates. With young people they would be productive of the purest benefits. They would give them the habit of expressing themselves with propriety of diction, of arranging their thoughts, and presenting them in the most forcible manner. They would impress on their memories every new fact that came under their notice, and the contents of every work whose merits formed the subject-matter of the discourses.

They would teach them that patience and temper are necessary to conduct any sort of discussion properly; and, finally, by bringing the minds of the various members of the family into constant intercourse with each other, by displaying the acquirements of some, and deficiencies of others, it would lead to a wholesome emulation, on the side of the uneducated,

to rise to a level with the more gifted; while it would afford these latter an opportunity of proving their kindness and good nature by assisting their fellow-laborers in their praiseworthy efforts with their advice and counsel; and thus, by drawing the bonds of union closer, the whole family would be linked together in social ties that nothing could sever, because they would be spun from the heart and strengthened by the intellect.—*The Family Friend*.

### THE MAYFLOWER.

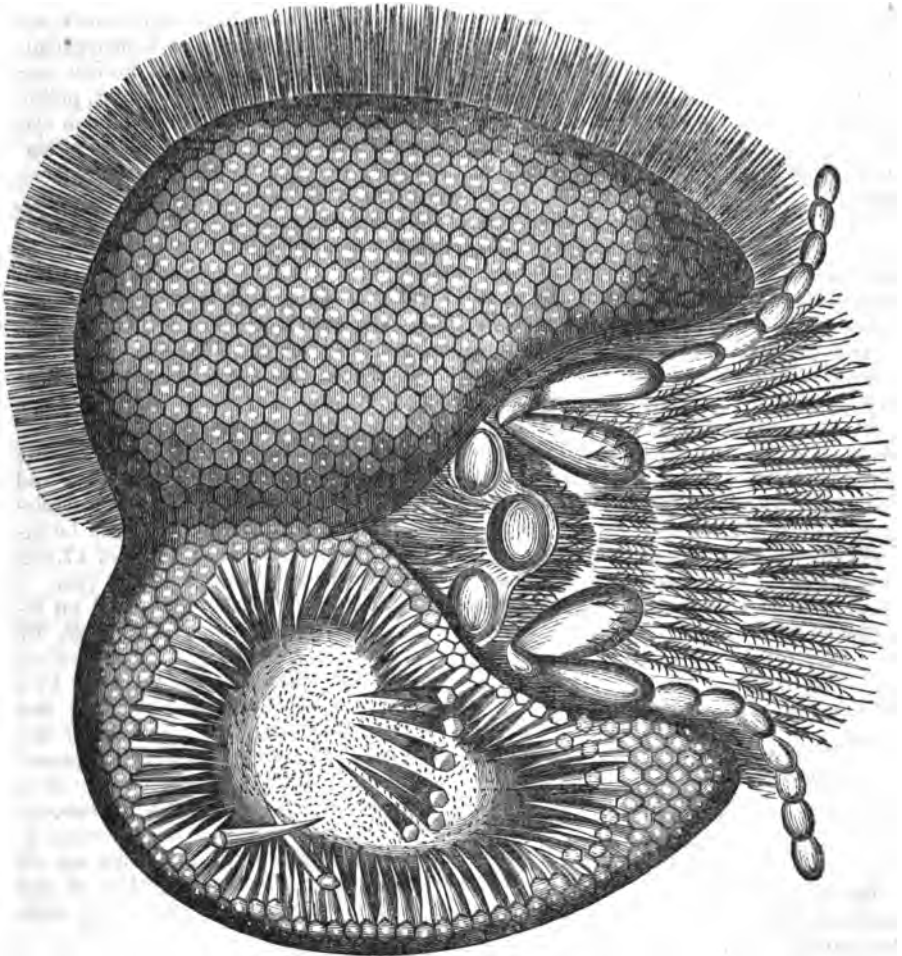
At the New England Society's dinner, given in New York, on the 23d of last December, Daniel Webster made the following beautiful allusion to the Mayflower, which bore our Pilgrim Fathers across the Atlantic:

"There was in ancient times a ship which carried Jason in his voyage for the acquisition of the Golden Fleece; there was a flag-ship at the battle of Actium which made Augustus Cæsar master of the world; there have been famous ships, which bore to victory a Drake, a Howe, a Nelson; there were ships which have carried our own Hull, Decatur, and Stewart in triumph. But what are they all, as to their chances of remembrance among men, to that little bark *Mayflower*?"

"That Mayflower was and is a flower of perpetual bloom. It can stand the sultry blasts of summer, the furious tempests of autumn, and remain untouched by the frosts and gales of winter. It can defy all climates and all times; it will spread its petals over the whole world, and exhale a living odor and fragrance to the last syllable of recorded time."

"THERE is a lesson in each flower,  
A story in each stream and bower;  
In every herb on which you tread  
Are written words, which, rightly read,  
Will lead you from earth's fragrant sod,  
To hope, and holiness in God."

THE noble mind, though forced to drain the cup of misery, can yield but generous thoughts and noble deeds.



MAGNIFIED EYE OF A BEE.

## THE EYES OF INSECTS.\*

**N**OTHING within the whole range of his investigations has more elicited the admiration of the philosopher, than the wondrous structure of the human eye. Exceedingly complex in all its arrangements, it abounds with requisite contrivances for securing, under every circumstance, distinct vision; and so complete are the several parts in themselves, and so admirably adapted to each other, that it is justly deemed the most perfect of all optical instruments.

Upon its curved and crystal front fall

the rays of light from unnumbered objects, spread over a landscape miles and leagues in extent; and the luminous lines converging in the eye with unerring accuracy to the interior surface, form a faithful picture of the entire scene within the compass of a finger-nail.

Perhaps a vast city is immediately before it, with its splendid panorama of

\* By the kindness of Messrs Pratt, Woodford & Co., we copy this article, with the illustrations, from "Views of the Microscopic World," by John Brocklesby A.M.—an interesting and valuable work, beautifully illustrated, and just published by that enterprising house.

towers and turrets, spires and cupolas, piles of massive buildings and thronged streets; while beyond, the harbor is crowded with the barks of commerce, and bays and misty isles stretch away in the dim distance; yet all these are perfectly delineated upon the retina, in their just proportions and natural colors.

But if our wonder is excited when contemplating the structure of the eye of man, and of other animals, it is still more heightened upon examining the visual organs of insects, beneath the powerful glasses of the microscope. The eyes of insects differ from those of other animated existence, chiefly in respect to *number, form, and arrangement*.

In some, as in the spider, the number varies from six to eight, possessing such a diversity in their mutual arrangement, that their relative positions have been employed by writers to designate the several species. Thus, in one kind, the eyes are arranged as in figure 2; in another as shown in figure 3; and in a third according to figure 4, and so on.



Fig. 2.

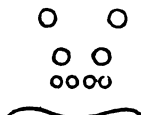


Fig. 3.



Fig. 4.

The scorpion has six visual organs, and the centiped twenty; but other insects, as the butterfly and the dragon-fly, are gifted with a vast number of eyes, set in a common ball, to which the name has been given of *reticulated*, or *net-work* eyes. These complex organs appear to be designed for horizontal and downward vision; while *coronet* eyes are found placed upon the front and top of the heads of insects. These latter organs appear as round, transparent, and shining points, and are supposed to be employed for upward vision; they are usually three in number, and are generally arranged in the form of a triangle.

#### RETICULATED EYES.

When the eye of a butterfly or dragon-fly is viewed through a powerful micro-

scope, it resembles a piece of net-work, and presents the appearance of a honeycomb, each apparent cell being a perfect eye. The outer surface of each is bright, polished, and round, like that of the human eye, and reflects as a mirror the images of surrounding objects. What therefore is commonly termed the eye of the dragon-fly, silk-worm, bee, and of other insects having similar organs of sight, is in fact a complex instrument of vision, consisting of a great number of single eyes arranged in a globular case, each capable of forming distinct images of the objects before it.

Dr. Hooke discovered no less than 7,000 single eyes in the compound eye of a horse-fly; while according to the computation of Leuwenhoeck, more than 12,000 are contained in that of the dragon-fly; and M. Puget counted in each of the reticulated organs of some butterflies which he examined, the astonishing number of 17,325 lenses, each constituting a perfect eye.

Optical artists have constructed an instrument called a *multiplying glass*, by taking a solid piece of glass, bounded on one side by a plane, and on the other by a curved surface, and then grinding and polishing the latter into a number of flat faces, still preserving, however, the general curvature. When a single object, as a flower, is beheld through this instrument, its images are multiplied in proportion to the number of exposed faces, and are all symmetrically arranged together, if the faces of the glass have been cut with regularity.

Reticulated eyes operate in the same manner; and naturalists, by carefully preparing these organs, and observing objects through them with the aid of a microscope, have been surprised and delighted at the wonders that have met their view. Not only are objects multiplied, but they are also *diminished* to a surprising degree. As Puget gazed at a soldier through the eye of a flea, an army of pigmies appeared before him; and the flame of a candle flashed forth with the splendor of a thousand lamps.

When Leuwenhoeck, in like manner, directed his sight to the steeple of a church two hundred and ninety-nine feet high, and distant seven hundred and fifty feet from

the place where he stood, it appeared no larger than the point of a cambric needle.

The reticulated eyes of many flies shine with the brilliancy of the finest gems, and gleam with the richest hues of light. In some the tints are red, in others green, while a third class glow with a play of colors of surpassing beauty, formed of mingled yellow, green, and purple. Some ephemeral insects are gifted with no less than four of these wonderfully complex organs, the ordinary pair being of a brown color, while the additional pair, shining with a beautiful citron hue, rise side by side from the upper part of the head.

The form of the single lenses in reticulated eyes is not the same in every insect endowed with this curious organ; for in the compound eye of a dragon-fly and honey-bee the lenses are six-sided, while in that of a lobster they possess a square form. In figure 5 is shown a magnified portion of the cornea of the compound eye of a dragon-fly, the single eyes of which are seen to be six-sided, and regular hexagons.

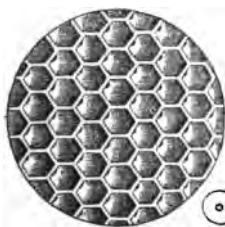


Fig. 5.



Fig. 6.

In certain positions, in respect to the direction of the light, they gleam with a rich golden hue, and three parallel borders are discerned, which divide the single eyes from each other. The inner circle in figure 6 represents the same object of its natural size.

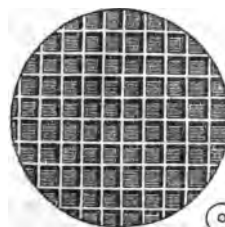


Fig. 7.



Fig. 8.

Figure 7 presents a magnified view of a part of the complex eye of a lobster, composed of a great number of single eyes, possessing a square form; the real size of the object is shown by the smaller circle in figure 8.

The eyes of the bee, which are delineated in figure 1, at the head of this article, are described by Swammerdam as being profusely covered with hairs, which pierce through the outer covering of the eye in the same manner as the hairs of the human body penetrate through the skin.

These hairs are very numerous, bristling in thick profusion over the eye, and are supposed to perform the office of eyelashes, or eyebrows, in protecting the organ from dust, or any similar annoyances that might work it harm. In this figure, the compound eyes of the bee, with the parts adjacent, are greatly magnified, and thus beautifully and distinctly revealed.

The upper part of the engraving exhibits one of the eyes in its perfect state, composed of hexagonal lenses, and bristling with hair. In the lower portion of the same figure, the other complex eye is shown, deprived of some of its hexagonal lenses in order that its structure may be perceived. The lenses, or single eyes, are here seen to have the shape of a pyramid.

The three oval figures, situated together in the angle formed by the two compound eyes, are the *coronet eyes* of the insect. The two branching members, which appear to be composed of a succession of oval figures joined together, that come over the reticulated eyes, are the antennæ of the bee. Between these the head is thickly covered with plumes of hair.

[*Scorpi-on*, an animal having resemblance to a crab, in form and mode of life. It has eight feet and two pinchers, and its body is covered with a hard shell, which is cast off yearly. The tail is composed of six joints, the last of which contains a poisonous sting. *Cen-ti-ped*, an insect, or worm, with a shell-like body, about two inches long, having from ninety to a hundred legs on each side. It generally lives in rich ground. *Pig-mies*, very small persons; dwarfs. *E-phem'er-al*, beginning and ending in a day; living only one day. *An-ten'na*, articulated, or jointed organs of sensation attached to the heads of insects. They are used as the organs of touch.]

## General Intelligence.

**EUROPE.**—Europe contains an area of 3,816,986 square miles, with a population estimated at 262,000,000, showing an average of 70 inhabitants to the square mile. Of this population about 250,000,000 are called Christians, of whom 133,000,000 are Catholics; 58,000,000 Protestants, and 59,000,000 belong to the Greek Church. Europe is now politically divided into 55 independent states, of which 38 belong to Germany, 7 to Italy, 2 to the Netherlands. Of these 47 have monarchical forms of government, and 8 are republics.

*The Russian Empire* occupies considerably more than one half of Europe, its area being 2,099,903 square miles. The population is estimated at 62,000,000, of whom 21,000,000 are serfs of the nobles, and belong to the soil. The army of Russia numbers 1,000,000.

**TELEGRAPH IN MEXICO.**—A magnetic telegraph has recently been put in operation in the city of Mexico, merely as an experiment. It has given general satisfaction, and efforts are now being made to form a company for establishing a line from Mexico to Vera Cruz.

**DEATH OF JOHN JAMES AUDUBON.**—This celebrated American Ornithologist died at his residence on the Hudson River, at the foot of One hundred and fifty-first Street, New York, on the 27th of January, 1851, aged 76 years. His health had been gradually failing for some two years past, hence his demise was not an unexpected occurrence. He departed full of days and rich in honors, and his end was worthy of his life. We believe he leaves two sons and several grandchildren.

**DEATH OF REV. WALTER COLTON.**—Rev. Walter Colton, well known as Chaplain of the U. S. Navy, Ex-Governor of Monterey, in California, also as an author, died at his residence in Philadelphia, on the 22d of January.

**A NEW LANGUAGE.**—Missionaries in Western Africa report the existence of a written language among a people recently discovered there. The alphabet is said to be syllabic, like the Ethiopic and Cherokee. There are about a hundred characters in the language, and each one represents a syllable. If this should prove to be a discovery of a highly developed language among some of the rude African tribes, it will be suggestive of many interesting problems.

**DR. OLBERS.**—This celebrated physician and astronomer died in March, 1840, at the age of 82. A statue in honor of him has recently been erected in a public square at Bremen.

**EXPLORATION IN CENTRAL AFRICA.**—Dr. Knoblecher, a German missionary, returned last summer from a tour in the interior of Africa, bringing with him much interesting information of that unexplored region. He has been farther into Soudan than any previous traveler, having passed up a branch of the river Nile to within four degrees of the Equator.

The farther he proceeded beyond those places usually visited by the Turkish traders, the more friendly he found the inhabitants. The wrongs inflicted by the Turks during their intercourse with these natives, seem to have made those who have encountered this class of robbers shy and revengeful toward the Europeans. The country is described as abounding in a luxuriant soil, and the most gorgeous vegetation, with beautiful birds and the largest of animals.

Dr. Knoblecher proposes soon to undertake the management of a well-equipped exploring expedition to penetrate farther into this unknown region, and to endeavor to establish missions among the inhabitants.

**CENSUS OF NEW YORK, BROOKLYN, AND WILLIAMSBURG.**—According to the late returns of the census for 1850, the city of New York contains 515,894 inhabitants, and 87,780 dwellings, thus showing an average of over 18 persons to each dwelling.

The city of Brooklyn contains 96,850 inhabitants, and 10,197 dwellings, giving an average of over 9 persons to each dwelling.

Williamsburg contains 30,786 inhabitants, and 3,886 dwellings—an average of 8 persons to each dwelling.

These cities are so intimately connected by business, and the daily intercourse of the thousands who reside in the cities of Brooklyn and Williamsburg, and do business in New York, that they should all be included in one city, as they probably will be ere long. Were they so enumerated now, the population would amount to more than 643,000.

The present population of the State of New York is about 3,100,000. This is a greater number of inhabitants than any state in the Union, by nearly half a million.

## Youth's Department.

To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought.

### "SERVED HIM RIGHT."

BY MISS ELIZA A. CHASE.

So you and Mr. Cliff have had quite a difficulty, I hear."

"Why, yes, something of a difficulty, but I do not think it will amount to much."

"But they say he struck you; I did not suppose you would stand that, for I thought you a man of spirit."

"Rest assured I will show you that I do not lack spirit."

"That is right. I would not give it up so. I would sue him or give him a good flogging. It would be serving him right."

"I intend to do something about it; I think I shall serve him right."

"I am glad to hear it. That man is the pest of the neighborhood, and I should rejoice to see him flogged. If you want any help, Mr. Warner, just send me word and I'll leave every thing to assist you."

"Thank you, neighbor Dale, I will surely send for you if I want you."

This was the conversation between two neighbors on their way home from their work. Mr. Warner reached his gate as he said the last words, and adding, "Good evening, neighbor," left the latter to pursue his way home.

"Warner really has more spirit than I thought," said Mr. Dale to his wife that evening. "I should not be surprised if he flogs Cliff severely."

"Why, that would be singular," replied she. "Mr. Warner is such a mild man, I did not think he could become so angry."

"We walked home together to-

night, and he was pretty cool at first but I talked to him awhile and got his temper up, and he said he would serve Cliff right. We shall hear from him, for he is a determined fellow. I should like to see Mr. Cliff get a good flogging, and his son, too, for he is the most impudent fellow I ever saw."

Mr. Warner's farm joined Mr. Cliff's, and the line fence was the cause of much trouble between them. It belonged to each one to make and repair half the fence, but Mr. Cliff would do nothing about it.

Mr. Warner was a kind and peaceable man, so to prevent difficulty he had kept the whole fence in repair for some time. He had a beautiful field of corn adjoining a pasture of Mr. Cliff's, and the fence proved but a feeble protection against the cattle, to whom the broad green leaves of the corn were a strong temptation.

Mr. Warner patiently drove the cattle out and repaired the fence as well as he could, and calling on Mr. Cliff represented the matter calmly and mildly, but received only abuse in reply.

Not long after he missed some of his own cattle, and after searching two or three days he found them tied fast to a tree in the woods back of his farm, with no particular harm done to them, however, but with appetites remarkably improved by fasting.

They had broken from their pasture into that of Mr. Cliff's, and he had disposed of them in this somewhat original manner.

Things went on in this way for some time, Mr. Cliff insulting and abusing, and Mr. Warner mildly bearing, till at length it became positively necessary to renew a part of the fence. Once more Mr. Warner tried to persuade Mr. Cliff to do his part of the work, but he refused. He remonstrated till Mr. Cliff, who had taken a glass too much, became exasperated and struck him.

Mr. Warner, though habitually mild, was naturally a man of strong passions, and, for an instant, resentment took the place of every other feeling, and his first impulse was to return the blow, but the second thought brought better feelings to his mind, and he turned slowly away, saying, "Mr. Cliff, I really pity you."

In a few days Mr. Warner found a valuable horse, belonging to Mr. Cliff, fast in a spring in the woods, and, with the assistance of his sons, he extricated the animal and thus saved its life.

It was autumn, and a man called on Mr. Cliff to buy some fruit. "Your neighbor, Mr. Warner, directed me to you," he said. "He told me you had some of the finest fruit in the place." Mr. Cliff turned away his head but made no reply.

"That is a beautiful horse of yours," said the man. "I had intended to buy Warner's, but, with an honesty rarely to be met with, he told me his horse was rather fractious, and that he thought yours would suit me better."

Shortly after Warner met Cliff in the road, and extending his hand, said, "Neighbor Cliff, it seems to me we do not live together as becomes Christians. Suppose we forget all difficulties and be friends."

Mr. Cliff gave his hand, and replied, in a voice somewhat unsteady, "I agree to that, neighbor Warner."

The next day several hands were

engaged in making the new line fence, and a proposition was made by Mr. Cliff to make a lane at one extremity so that Mr. Warner's cattle could have access to a spring which belonged to the former.

"Have you settled with Cliff yet?" asked Mr. Dale of his neighbor.

"Oh, yes, I begun some time since."

"How did you do it?"

"Oh, easily enough."

"Was he not pretty strong?"

"Yes, and stubborn, too, but he yielded at last."

"I was afraid you would sue him and lose the sport of whipping him."

"Oh, no danger of my suing him. I served him right, for I gave him just what he deserved."

"I am really glad of it, for to tell the truth, I was afraid you would be faint-hearted about it. By the way, have you heard that he is very sick?"

"No, indeed; I must go and see him. Will you go with me?"

"Go and see him after you have flogged him! He will take it as an insult."

"I think not. I have an idea he will be glad to see me."

"Well, it seems very strange. I will go with you, but I should not be surprised if the old fellow should turn you out of the house."

When shown into the room where Mr. Cliff lay, Warner reached his hand, which the former took, and said, with trembling lips, "So we have met again, neighbor Warner;" and the two men for a moment were weak as children. It was evident that death was doing his work, and Mr. Warner, at Mr. Cliff's earnest request, agreed to remain during the night.

Mr. Dale was lost in utter astonishment. When next he met Mr. Warner he exclaimed, "Do tell me the meaning of all this. Did you not flog Mr. Cliff?"

"I conquered him."

"I can not understand you. Explain it to me."

"That I can easily do;" and Mr. Warner told him the story.

Mr. Dale dropped his head and mused for a moment; then looking up he said, "Mr. Warner, you have taught me a lesson I shall never forget."

Mr. Cliff's illness proved fatal. He died after commending his son to the care of Mr. Warner, whom he appointed his guardian; and from the character of the youth in after years it was pretty evident that he, too, had been "served right."

### LOOK AT THE BRIGHT SIDE.

Look at the bright side. The sun's golden rays  
All nature illumines, and the heart of man  
cheereth;

Why wilt thou turn so perversely to gaze  
On that dark cloud which now in the distance  
appeareth?

Look at the bright side! Recount all thy joys;  
Speak of the mercies which richly surround  
thee;

Muse not forever on that which annoys;  
Shut not thine eyes to the beauties around  
thee.

Look at the bright side! Mankind, it is true,  
Have their failings, nor should they be spoken  
of lightly;

But why on their faults thus concentrate thy  
view,  
Forgetting their virtues which shine forth so  
brightly?

Look at the bright side! And it shall impart  
Sweet peace, and contentment, and grateful  
emotion,

Reflecting its own brilliant lines on thy heart,  
As the sunbeams that mirror themselves in  
the ocean.

Look at the bright side! nor yield to despair;  
If some friends forsake, yet others still love  
thee;

And when the world seems mournful colors to  
wear,

Oh, look from the dark earth to heaven above  
thee.

*Selected.*

### LET THE HEART BE BEAUTIFUL.

So the heart, the heart be beautiful,  
I care not for the face;  
I ask not what the form may lack  
Of dignity or grace;  
If the mind be filled with glowing thoughts,  
And the soul with sympathy,  
What matter though the cheek be pale,  
Or the eye lack brilliancy.

Though the cheek, the cheek be beautiful,  
It soon may lose its bloom,  
And the luster of the eye be quenched  
In the darkness of the tomb;  
But the glory of the mind will live  
Though the bloom of life depart;  
And oh! the charm can never die  
Of a true and noble heart.

The lips that utter kindly thoughts  
Have a beauty all their own—  
For gentle words are sweeter far  
Than music's softest tone;  
And though the voice be harsh or shrill  
That bid the oppressed go free,  
And soothes the woes of the sorrowing one,  
That voice is sweet to me.

*Selected.*

### THE LOVE OF COUNTRY.

THE Germans call their native  
country *Father-land*; the En-  
glishmen say *Mother Country*.  
Father! Mother! two of the  
tenderest words in language. These  
two nations employ the very choicest,  
dearest signs of thought and feeling to  
portray that love which should dwell  
in the heart toward one's native land.

When children can forget a pro-  
tecting father, or cease to love a ten-  
der mother, then may a citizen turn  
his back upon his country, or see her  
struggling in the grasp of faction  
without holding out to her a helping  
hand. But not till then.

HUMILITY is a flower that prospers  
most when planted on the rich soil of  
a noble and great mind.





## SIDNEY'S CONVERSATION WITH THE CHILDREN.—No. I.

### THE CAUSE OF WINDS.

**SOME**, children, the weather is too cold, and the wind blows too hard for you to play in the open air, to-day, and if you will come near me and listen, I will tell you something about winds.

*Henry.*—O do, Uncle Sidney, we shall be so glad to hear it.

*Jane.*—Yes, uncle, we shall be happy to listen to you.

*Emma.*—I will get my little stool and sit down at your feet.

*Sidney.*—Frank, you may come and stand by my left side. George and Jane may stand at my right hand, and Henry will take a seat before me, and—

*Mary.*—I will take my place by the side of brother Henry, uncle.

*Sidney.*—Yes, that will do. Now I am going to tell you about the wind which you hear roaring without, and you may ask me questions about it when you do not clearly understand, or when you wish to know more.

*George.*—Thank you, uncle, I should like to know what wind is.

*Sidney.*—Wind is air in motion.

*George.*—But what puts the air in motion?

*Sidney.*—It is put in motion by heat. Heat causes the air to expand, and thus it becomes lighter than the cold

air and rises up, when the cold air rushes in to fill its place.

*Henry.*—What heats the air?

*Sidney.*—The rays of the sun heat it. They do not heat it by passing through it, but by contact with the earth. This heat varies in temperature as the surface of the earth is more or less directly exposed to the influence of the sun, hence the air is not all heated alike.

*George.*—I think I understand you, uncle; and that must be the reason why it is so much warmer on the side of a hill toward the sun than on the opposite side.

*Sidney.*—Well done—you are right, and that is a good illustration.

*Jane.*—I did not think the air could be made to grow larger, or expand, as you call it, uncle.

*Sidney.*—Do you know, Jane, how George makes his foot-balls?

*Jane.*—O yes; he takes a bladder and blows into it, through a quill, till it will contain no more air; then he ties it up so that no air can escape and crowds it into a leather case, which he laces up tight.

*Sidney.*—Well, when he had blown into the bladder but a little while it was full of air, but the bladder was

still soft, so he continued to blow into it until the air became very dense and thus made it hard.

*Mary.*—Then air can be made smaller, too, can it?

*Sidney.*—Yes, Mary, air can be compressed, or made smaller, as you term it, as well as expanded. Now I will tell you how you may know that this is so.

Take a bladder that is not quite full of air, and be sure it is tied up so tight that no more air can get in or out, then hold it near the fire and it will soon be quite full and hard. This is because the air in it has expanded.

*George.*—Now I know why the bladder burst, which I blew full of air and held to the fire to dry, the other day—it was because the heated air swelled so much that the bladder was not strong enough to hold it.

*Sidney.*—You are right, George, and I am glad to see you so thoughtful and ready to apply the knowledge you derive from our conversation to the explanation of things you before thought so strange.

*Emma.*—Will the air in the bladder remain swelled all the time?

*Sidney.*—No, my dear; if you put it in a cold place it will soon become as small as it was before it was heated. Now I trust you all understand that air will expand by heat and contract by cold.

*Mary.*—Yes, I think all of us understand that, now, but I should like to know how to prove that the heated air rises, since we can not see it go up.

*Sidney.*—You know that if you hold your hand over a burning candle or lamp, that it will burn you when your hand is many inches from the blaze, but you can hold your hand very near the side of the flame without feeling the heat. It is because hot air rises.

When a fire is made in a grate or fireplace it heats the air around it, and this heated air rises up the chimney

and carries the smoke along with it. If it was not so, chimneys would be of but little use in conducting the smoke from our rooms.

There is a simple experiment which will illustrate that the cold air takes the place of warm and light air.

*George.*—What is that, uncle? I am fond of experiments.

*Sidney.*—It is this: when the air in a room is warmer than the air outside, by opening the door a little, so as to leave only a small crack, and holding a lighted candle at the top, the flame will be bent outward. This will show you that the air is flowing out of the room.

Then, by placing the candle near the floor, the flame will be bent toward the room, thus showing that a current of air is rushing in to take the place of that which goes out. If the room is very warm, you can easily perceive, from holding the candle in these two currents, which is the warm one and which one is cold.

*Henry.*—Now I think I know why the wind blew from all directions toward the fire when Mr. Carter's house burned; it was because the heated air ascended so fast that the cold air flowed in from all sides to fill its place.

*Sidney.*—A correct conclusion, Henry, and I am pleased that you understand the principles of wind so well. But it is late, and we must finish our conversation some other day.

*Mary.*—Let it be soon, uncle; it will be so interesting, for I want to learn much more about winds.

*Henry.*—We will come again next Saturday, as there will be no school on that day, if you will tell us more about winds, then.

*Sidney.*—Yes, I shall be happy to tell you all I know about them, since you are so anxious to learn; but good bye now.

*Children.*—Good-bye, uncle.

## Natural History.



### THE WHITE BEAR.

**T**HE WHITE BEAR inhabits only the coldest parts of the globe, where the ground is covered with snow and ice during the whole year. He lives chiefly on the land and on the ice, but he is an excellent swimmer, and often ventures at sea, or dives down into the water, to catch fish. He has been found on floating ice many miles from the shore.

His food consists principally of fish and seals, which he catches himself; but he will also eat the flesh of dead whales that happen to float on shore. The picture at the head of this article represents a White Bear feeding on a whale, lying in the midst of ice.

The White Bear is usually eight or nine feet long and about four feet high. His fore paws are from eight to ten inches wide. Sometimes this animal is found so large that one will weigh 1,500 pounds—about the weight of an

ox. He has a long nose and short ears. His legs are very large and his feet broad. His toes end in five long, sharp claws on each foot.

The color of this animal is a yellowish white, and his hair is very long, thick, and shaggy. It is not in color alone that he differs from the black bear. The head and neck of the White Bear are longer, and not so thick in proportion, as those of the black bear, and he is also a much larger and more ferocious animal.

The White Bear lives entirely on fish and flesh, and never eats fruits or vegetables; while the black bear lives chiefly on fruits and nuts, and never eats flesh unless pressed with hunger.

The largest animals are found in the torrid zone; and as we leave that region, pass into the temperate, and so on to the frigid zones, both man and the animals decrease in size. But to

this there is one exception. The White Bear seems to increase both in size and strength in proportion to the coldness of the country where he lives.

This animal is noted for its fondness for its young, and the courage with which it defends them. When attacked the first care of the mother is to cover her cubs from harm. Though wounded and dying she will continue to caress her young, and try to save them during the very last moments of her life.

No animal is more fierce and courageous in combat. When attacked and wounded he pursues his enemy with terrible ferocity, and carries death and destruction wherever he goes. He will either destroy those who wound him, or die fighting against them. Yet he is not so fierce and cruel unless provoked.

A story is told by Goldsmith of a Greenlander and his wife paddling out to sea, who came near an ice-cake on which a White Bear was floating. When the animal saw them he jumped into their boat and sat quietly down, to be rowed toward the shore.

The poor Greenlander did not like his new passenger, but seeing no way to get rid of him he rowed him safely to the land, when the huge animal stepped out of the boat and walked calmly away without offering to pay any thing for his passage.

### TRUE MANLINESS.

**B**OYS often have very wrong ideas of what constitutes true manliness. I once knew a boy who believed it would make a man of him to chew tobacco. With this strange belief he learned to use that weed when he was about ten years of age. At first it made him quite sick every time he put it into his mouth; yet the thought that it would make him a man induced him to keep trying, and after a long

time he began to love the taste of tobacco.

When this boy became a young man, he was ashamed of the habit, and did not like to have it known that he used tobacco. He saw how foolish he had been, and wished himself rid of his filthy habit. But he had indulged his practice so long, that he found it very hard to discontinue it—just as the drunkard finds it hard to do without his brandy.

Now do any of you, my readers, suppose that chewing tobacco made this boy a man? Think of a boy with a quid of tobacco in his mouth—how disgusting! If you should know a boy who used tobacco, would you think him a man because he did so?

It is only a few days since I saw a well-dressed boy, apparently about twelve years of age, approaching me in one of the streets in the city of New York. On coming near I discovered that he was smoking a cigar with all the airs of a dandy. Just before I met him he encountered two neat-looking boys of about his own age, one of whom made some remarks about how foolish it was for such a boy to smoke.

The would-be-thought-man chanced to hear the remark and, stepping up to the two boys, accused them of insulting a gentleman. He also made some violent gesticulations, and threatened to teach them better manners if they ever insulted him again. The two boys walked quietly on, making no reply to the ungentlemanly little dandy. Which of these boys, think you, behaved the most manly?

Some children suppose that what is manly or womanly can be put on in the shape of clothes made in the fashion of those worn by men and women. I once read of a very little boy who took great satisfaction in having loops sewed on his socks, that he might draw them on as men draw on boots.

Some children think that to wear a coat, cravat, boots, etc., will make them manly. This, however, will be a matter of very little consequence if they were not apt to lose sight, in this way, of what constitutes true manliness. To be manly is to *dare to do* what is right, and not to wear all that may become a man. I will give you a few illustrations of what it is to be manly.

"A boy, eight years of age, was required by his father to drive the cows home every night. One dark, rainy evening in autumn, just as the family had settled themselves to their accustomed occupations, about a bright, cheerful fire, the father asked, 'Did you bring the cows home, my son?' 'Yes, father,' he replied; adding, after a moment's hesitation, 'but I did not put up the bars.' It was manly in this boy to confess his omission at the expense, as he foresaw, of a dismal walk through the rain and darkness to repair it."

I heard of another boy, twelve years of age, who was attending a large school in one of our cities. One day he was visited in his room by two young men, several years older than himself, who used very profane language. This was highly offensive to the lad, and after bearing it for some time, he said, "Gentlemen, profane language is offensive to me; you must be so good as to abstain from it, or leave my room."

The rebuke was effectual; they remained in his room, but made no more use of bad language in the lad's presence. This was a high degree of manliness.

I heard of another boy who had long been afflicted with a diseased and helpless leg. One Sunday morning he was told that the surgeon had decided that it must be amputated. "Then," said the little boy, "I will have it done immediately, before mo-

ther comes home from church, that she need not be pained at my suffering." It was done as the boy desired.

Now do you think that the fashion of these boys' clothes made them manly? I am sure you can not think so. I have seen *men* who were not manly, though they would like to be called gentlemen. If you wish to be manly always do right.

### NEWTON BLOWING SOAP BUBBLES.



WHEN Sir Isaac Newton changed his residence, and went to live in Leicester Place, his next door neighbor was a widow lady, who was much puzzled by the little she had observed of the habits of the philosopher.

One of the Fellows of the Royal Society of London called upon her one day, when, among other domestic news, she mentioned that some one had come to reside in the adjoining house, who she felt certain was a poor, crazy gentleman, "because," she continued, "he diverts himself in the oddest ways imaginable."

"Every morning, when the sun shines so brightly that we are obliged to draw the window-blinds, he takes his seat in front of a tub of soap suds and occupies himself for hours blowing soap bubbles through a common clay pipe, and intently watches them floating about till they burst. He is doubtless now at his favorite amusement," she added; "do come and look at him."

The gentleman smiled, and then went up stairs, when, after looking through the window into the adjoining yard, he turned around and said, "My dear madam, the person whom you suppose to be a poor lunatic, is no other than the great Sir Isaac Newton, studying the refraction of

light upon thin plates, a phenomenon of which is beautifully exhibited upon the surface of a common soap bubble."

*Selected.*

### ANECDOTE OF A TURKISH JUDGE.

**A** STORY is told of an Oriental merchant, who, at his death, left his property to three sons. According to this merchant's will the seventeen horses belonging to the estate were to be divided between the sons in such a manner that the eldest should receive one half of them, the second one third, and the youngest one ninth of the whole.

When the sons came to make the division of the property, they found it impossible to comply with the conditions of the will in regard to the horses without sacrificing one or more of the animals. Being thus puzzled they repaired to the *cadi*, or judge of the town, for his assistance.

After reading the will carefully, the *cadi* said it was such a difficult question that he required time for deliberation, and requested them to return after two days, when he would give his decision. At the appointed time they made their appearance, when the judge said:

"I have carefully considered your case, and find that I can make such a division of the seventeen horses among you as will give each more than his strict share, and yet not one of the animals shall be injured. Are you content?"

"We are, O judge," was the reply.

"Bring forth, then, the seventeen horses, and let them be placed in the yard," said the *cadi*. The animals were brought in, and the judge ordered his groom to place his own horse with them. He then bade the eldest brother count the horses.

"They are eighteen in number, O judge," he said.

"I will now make the division," observed the *cadi*. "You, the eldest, are entitled to half; take, then, nine of the horses. You, the second son, are to receive one third; take, therefore, six; while to you, the youngest, belongs the ninth part, viz., two. Thus the seventeen horses are divided among you; you have each more than your share, and I may take my own steed back again."

"*Mashallah!*" exclaimed the brothers, with delight; "O *cadi*! your wisdom equals that of our lord, Soleiman *Ibu Dacod*."

### SAGACITY OF A CAT.

**A** CAT was observed one day attempting to defend herself against the assaults of a number of swallows. They kept flying round about, and occasionally darting at poor puss, while she was endeavoring to retaliate by striking them with her claws.

Their onsets becoming more numerous and determined, the cat laid quietly down as if she had been dead, and the swallows, deceived by her appearance, desisted from their warfare and mounted into the air.

Puss no sooner perceived this, than taking advantage of the opportunity she bounded off to a place of refuge. Her assailants, having observed her movements, made after her, but she had got a place of shelter before they could reach her. What was the cause of the quarrel is not known.—*Selected.*

**PITY IT'S ALTERED.**—There was a time in the reign of Queen Elizabeth, when rum and brandy were sold by the ounce by apothecaries, as a medicine; and a teaspoonful was considered a dose, by all regular physicians.

He shall be immortal who liveth till he be stoned by one without a fault.

## For Children.

"To aid the mind's development, and watch  
The dawn of little thoughts."

### PUSS AND HER THREE KITTENS.

ONE morning a happy cat lay on some hay in a snug corner of the barn, purring to three pretty kit-tens which lay by her side.

Puss had been very sly and had kept her kit-tens in this same snug corner for a month, and no one had found them.

But on this morning one of the boys found them while he was getting hay to feed the cows.

"Ah!" said he, as he turned up some hay with his fork, "so I have found you, have I?"

Then he took off his hat and placed the three kit-tens in it, and went toward the house.

The poor cat ran mew-ing by his side, and look-ing up as if in fear that her dear little ones would be drowned.

But he took them in-to the house, and plac-ing them on the floor, he said to the farm-er's little girl, who was but ten years old, "Ma-ry, these must all be drowned."

"No, no, pret-ty crea-tures, you shall not be drowned," said Ma-ry, as she took them up one by one.

"I know that moth-er will let me keep you till I find some kind person to whom I can give you."

Then Ma-ry ran to her moth-er to gain leave to keep the kit-tens a-while.

When her moth-er gave her con-sent to let her keep them, she placed them on a lit-tle rug in a nice box, and put the box in the wood-house.

Ma-ry went to look at them many times a day.

One of the kit-tens was quite white, one was black, and one gray. And Ma-ry gave them names.

The white one she called Snow-ball; the black one, Jetty; and the gray one, Nel-ly.

After a few days Jet-ty was giv-en to an old wom-an, who lived in a cot-tage.

Ma-ry was sure that she would be ver-y kind to it, for she was kind to ev-er-y-thing.

Snow-ball was giv-en to Miss Lu-cy, at the large white house in the vil-lage.

Miss Lu-cy made a great pet of her. She gave her new milk and bread and but-ter twice a

day, and made a soft cushion for her to sleep upon.

She tied a pink collar about her neck, and called her the greatest beauty in the village.

Mary kept Nelly two weeks. One day a lady called at the house where Mary lived, and saw her kitten asleep on a rug near the fire.

She asked Mary if she would part with her kitten; "for," said the lady, "I know a little girl who is ill, and I am sure this kitten would please her much."

"O yes," said Mary, "if it will please her, I will let it go, though I am very fond of Nelly."

Then the lady put Nelly in her muff and took her away. Mary saw her head peeping out of the muff as the lady left the house.

When she had gone out of sight, Mary turned away from the window with a tear in her eye. She felt at first as if she had lost all that she loved.

In a little while Mary went out in the yard, when a whole brood of chickens came running toward her, thinking she was bringing them food.

Then old Hector, the dog, came up and licked her hands. She went into the barn yard, and her pet lamb came frisking about her.

Mary's sadness soon passed away, and her heart grew glad again. She felt that there is always something for us to love, and something to love us.

## AUNT ELIZA'S STORIES,—No. XI.

### THE LOST SHILLING.

ONE morning as James Morgan was going into school, after the other scholars had taken their places, he found a shilling by the door. His eyes sparkled with joy as he picked it up, for his mother was a widow and very poor, and he had never had so much money before in his life.

His first thought was, what he should buy with it. To get toys was altogether out of the question, when his mother and sisters were suffering at home, for both food and clothing, and he thought of a thousand things which they needed.

But suddenly the thought came into his mind whether the money was his. He started at the idea, and said to himself, "Why, certainly, it is mine, for I found it."

But there was a little busybody in his mind that told him the money was not his; that some of the scholars had probably dropped it, and that he had no claim to it.



Reason as he would he could not feel satisfied to keep it, and yet it seemed very bad to give it up when he so much needed it.

"No one will know it if I keep it," thought he, "and if any one asks for it I need say nothing. No one saw me pick it up."

"Thou, God, seest me," whispered the busybody; and James actually started, for he thought some one spoke to him, but the little voice was felt, not heard.

He leaned his head against the school-house and thought for a long time what he should do. It was a hard struggle. "If I was going to spend it for playthings," said he; "but little Mary wants shoes, and last night the children cried for bread."

Now, little children, what would you have done in such a case? You will say you would not have kept the money; but I hope none of you will ever be so sorely tempted as poor James was.

His little brothers and sisters cried for bread, and he had found money to buy it. Would you blame him if he had kept it?

"It is mine," he said; but busy little conscience whispered, "Thou shalt not covet thy neighbor's goods;" and James felt that because he very much wanted

the money he tried to believe that it was his.

"No, no," said he, "I am very poor, but I will be honest;" and pressing his lips firmly together, and closing his eyes to keep back his tears, that would come in spite of his efforts, he called the teacher to the door, and telling him that he had found the money, gave it to him quickly, as if he was afraid his good resolution would fail.

"And why did you not keep it?" asked the teacher, pleased at his honesty.

"It was hard, very hard, to give it up," said James, "but I could not be dishonest;" and he burst into tears.

The teacher told him that such honesty should not go unrewarded, and that he was much happier than he would have been had he kept the money. And so kindly and soothingly did he talk, that James soon dried his tears and smiled again.

When the teacher gave the money to the little girl who had lost it, and who had grieved sadly that she could not buy an orange for her sick brother, there were few happier boys than James.

That night the teacher went home with James, and then went around the neighborhood and told the rich people the story of his poverty and honesty, and in

less than a week there were found in his mother's dwelling, bags of flour, rolls of butter, and other food, and nice, warm clothing for the children whose cries for bread had so nearly tempted their brother to do wrong.

Every one was willing to take James to work, for his name as an honest boy won the hearts of every one, and he found what all children will find, that in every case, and in all circumstances, "honesty is the best policy."

Whenever he was tempted to do wrong, that shilling came into his mind, and again his better feelings triumphed.

When he became a man, his character for honesty brought him many customers, and the store of James Morgan was called the best in town, "for we can believe what he tells us," people would say.

#### NEVER GIVE A KICK FOR A HIT.

**I** LEARNED a good lesson when I was a little girl, says a lady. One frosty morning I was looking out of the window into my father's barn yard, where stood many cows, oxen, and horses waiting to drink.

The cattle all stood very still and meek, till one of the cows, in trying to turn round, hap-

pened to hit her next neighbor; whereupon the neighbor kicked and hit another.

In five minutes the whole herd were kicking each other with fury.

My mother laughed, and said, "See what comes of kicking when you are hit."

Just so I have seen one cross word set a whole family by the ears some frosty morning.

Afterward, if my brothers or myself were a little irritable, she would say, "Take care, my children—remember how the fight in the barn yard began.

"Never return a kick for a hit, and you will save yourself and others a great deal of trouble."—*London Child's Companion.*

#### THE TRUTHFUL BOY.

ONCE there was a little boy,

With curly hair and pleasant eye,  
A boy who always spoke the truth,  
And never, never told a lie.

And when he trotted off to school,  
The children all about would cry,  
"There goes the curly-headed boy,  
The boy who never tells a lie."

And every body loved him so,  
Because he always told the truth,  
That every day as he grew up,  
'Twas said, "There goes the honest youth!"

And when the people that stood near  
Would turn to ask the reason why,  
The answer would be always this—  
"Because he never tells a lie."

*Selected.*

## A SIXPENCE WELL INVESTED.

THE other day we saw a bright-eyed little girl tripping along the street with a basket on her arm, apparently sent on some errand.

All at once she stopped and commenced searching for something which she had lost among the snow and ice.

It was evident that it was something of value, and that she was in trouble.

Her search was eager and nervous; the bright smile had vanished from her face, and tears were rolling down her cheeks.

A gentleman, passing at the moment, noticed the trouble of the little creature, and asked her what was the matter.

"Oh! sir," said she, her little bosom swelling, and tears falling fast, "Oh! sir, I've lost my sixpence!"

The gentleman took a piece of money from his pocket, and called her to him, saying, "Here, sis, don't cry for the lost sixpence, here is another," and placed it in her hand.

"Oh, dear sir!" said she, as she bounded forward, "how I thank you."

Her grief was removed; the bright smile was restored; the fear of a mother's frown for her

carelessness was gone, and her little heart beat lightly again.

Think you that man, as he remembers that pretty face, beaming with gratitude and joy, will ever regret that well-invested sixpence?

A whole world of happiness bought for a sixpence! How easy a thing it is to shed sunshine on the hearts of those about us!—*Selected.*

## THE LOST KITE.

My kite! my kite! I've lost my kite!  
Oh, when I saw the steady flight  
With which she gained her lofty height,  
How could I know that letting go  
That naughty string would bring so low  
My pretty, buoyant, darling kite,  
To pass forever out of sight?

A purple cloud was sailing by,  
With silver fringes, o'er the sky;  
And then I thought it came so nigh,  
I'd let my kite go up and light  
Upon its edge so soft and bright,  
To see how noble, high, and proud  
She'd look while riding on a cloud!

As near her shining mark she drew,  
I clapped my hands; the line slipped through  
My silly fingers, and she flew  
Away! away! in airy play,  
Right over where the water lay,  
She veered, and fluttered, swung, and gave  
A plunge—then vanished with the wave!

I never more shall want to look  
On that false cloud, or on the brook;  
Nor e'er to feel the breeze that took  
My dearest joy, thus to destroy  
The pastime of your happy boy,  
My kite! my kite! how sad to think  
She soared so high, so soon to sink!

*Selected.*

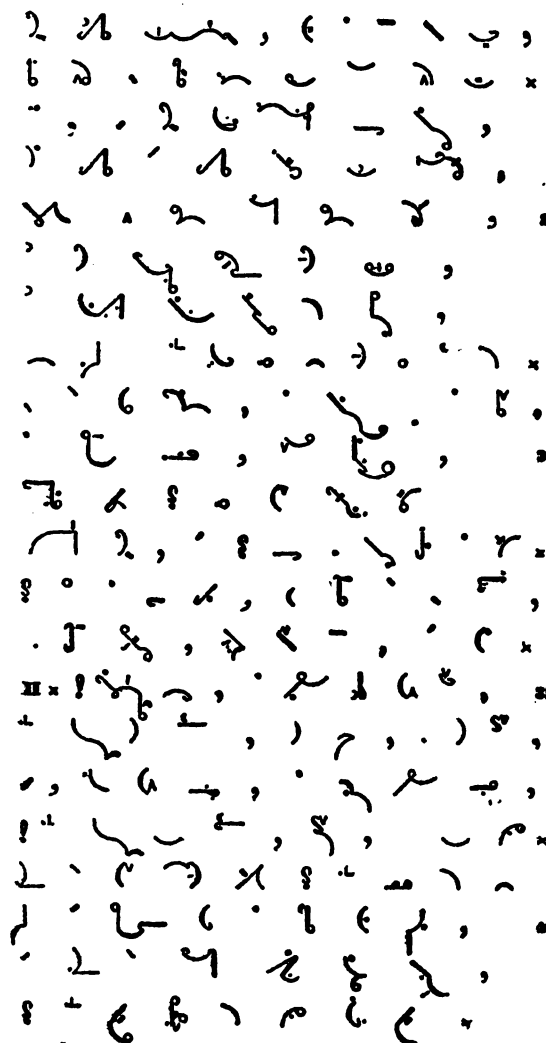
## Phonography.—Lesson 11.

## PREFIXES AND AFFIXES.

THE prefix *com* or *con* is written by a light dot at the beginning of the consonant. Examples of this may be seen in the word *compose*, twenty-fourth line; *connection*, thirtieth line, and *contain*, in the thirty-second line of Pope's Essay on Man. The prefix *accom* is

## POPE'S ESSAY ON MAN.

## EPISTLE I.



written by a heavy dot placed in the same manner.

*N* is written above the line for *incom* or *incon*, and on the line for *uncom* or *uncon*.

The half-length *nt* is written near a stem for *inter*, *enter*, or *intro*.

*Magna*, or *magni*, is made by the stem *m* above the rest of the word.

*Recom*, *recon*, and *recog*, as in the words *recompense*, *recognize*, etc., are represented by writing the character for *r* before the remaining portion of the word.

A small circle near the beginning of a stem represents *circum*, and when placed at the middle of the stem it stands for *self*, as in the words *himself*, *selfish*. A larger circle placed in this position stands for *selves*.

The affix *ing* is represented by a small dot at the end of a word. An example of this occurs in the word *tempting*, in the eighth line of the Essay. See Lesson 10. A heavy dot, or two dots in the same position, expresses *ings*.

For the termination *ly* the character for *l* may be written near the end of the word, where it is not convenient to join it to it.

Please write the following in Phonography.

What is beautiful? A good man struggling with misfortune, and preserving untainted his reputation. A dutiful child obeying the mandates of parents, and walking in the way of righteousness.

THE AMERICAN PHONOGRAPHIC JOURNAL, edited and published by E. Webster, No. 68 South Third Street, Philadelphia, Pa., is a monthly periodical, of sixteen pages, 16mo, neatly printed in phonography.—Terms, \$1 25 per year, in advance, or 12½ cents per number.

## Exchange Department.

### DRAWING AND MUSIC IN SCHOOLS.

THE following is an extract from Professor Stow's Report on the Prussian Schools:

"The universal success and beneficial results with which the arts of Drawing and Designing, Vocal and Instrumental Music, have been introduced into schools, was another fact peculiarly interesting to me. I asked all the teachers with whom I conversed, whether they did not sometimes find children actually incapable of learning to draw and to sing. I have had but one reply, and that was, that they found the same diversity of natural talent in regard to these, as in regard to reading, writing, and other branches of education; but they had never seen a child who was capable of learning to read and write, who could not be taught to sing well and draw neatly, and that, too, without taking any time which would at all interfere with—indeed, which would not actually promote—his progress in other studies."

### NOTICE OF EXCHANGES.

SINCE issuing our last number, but a few drawings have been received. We trust our friends have not become weary in well-doing; but perhaps they are preparing to astonish us by some large packages, showing their great improvement during the past winter. Well, that is not a bad idea. Send them along.

From the pupils of Miss Eliza A. Chase, Orangetown, N. Y.—Margaret Blauvelt, aged 16; Maria T. Demarest, 16, three specimens; Matilda Cooper, 12; Jane Maria Post, 14, two specimens; Mary Emeline Cooper, 8; James Van Derbelt, 14, two specimens; John Henry Post, 11, two specimens; Ryckerman Bogert, 11; William Van Houten, 12. Several of these specimens were far superior to any we have before received from these pupils.

A GOOD DRAWING BOOK.—Those who wish a scientific and practical work on drawing, one that gives elementary instruction from the sharpening of a pencil, making a pen, and the forming of the most simple lines through the principles of drawing and shading of various objects, foliage, etc., including the human figure, and also perspective, with instruction, for copying from nature, landscape drawing, etc., will find it in "Chapman's American Drawing Book," published by J. S. Redfield,

Clinton Hall, New York. The work is divided into *three parts*, quarto form, 56 pages each, price 60 cents per part. Part I. treats of Primary and Elementary Drawing; Part II. of Elementary Drawing continued; Part III. of Perspective.

### QUERIES.

#### MATHEMATICAL.

1. THERE is a tree eighty feet high, which the owner wishes to cut off at such a height from the ground that while the butt end rests on the stump, the top shall reach the ground just forty feet from the stump. At what distance from the ground must the tree be cut off?

By N. M., of Troy, N. Y.

2. Two numbers have the following properties: 1 subtracted from the first will leave a number equal to the second divided by 2, and when added together their sum is 16. What are the numbers?

#### ANSWERS TO QUERIES.

Since issuing our last number we have received answers to the mathematical questions in the January number, from the pupils of the "Branchville Academy," Branchville, N. J.; M. C. Sibbet, principal; from pupils of Public School No. 7, Brooklyn, David Syme, A.M., principal; also from N. M., of Troy, N. Y. We think N. M. misunderstood the question in regard to the widow's portion of the estate. The solution gave her too large a share.

Mr. Sibbet's pupils render the following answers to the second problem, viz.:

The widow's portion of the estate

amounts to	-	-	-	-	\$1602 39 <sup>284</sup> / <sub>1156</sub>
First son's	-	-	-	-	1888 86 <sup>284</sup> / <sub>1156</sub>
Second son's	-	-	-	-	1111 86 <sup>284</sup> / <sub>1156</sub>

N. M. also sends us the following answers to the first two questions in the February number: Answer to the first—The weight of the ring was 1 pennyweight and 6 grains. Answer to the second—40,820 chimes.

We hope soon to receive answers to the remaining question in the last number (February), also of those in the present. Will not some pupils furnish answers to the historical questions also? Some teachers and pupils have already sent us questions for publication, but we should be pleased to receive many more.

## Editor's Cable.

### SCHOOL EXAMINATIONS.

THE value of school examinations, when properly conducted, is too seldom thought of by teachers and parents. Probably no one step that could be taken by teachers would awaken more interest on the subject of education and good schools than to give public examinations of their pupils at the close of each term. Parents desire to see their children improve in their studies, and they *should* wish to know how their children are occupied while absent from them, and under the care of the teacher.

Let a public examination be given, at which all the parents are urged to attend; and let the exercises be so conducted that while they show that the pupils thoroughly comprehend the elements of the sciences which they are pursuing, the spectators may learn something of the same, if not new, yet refresh their own memories on the subject. From such exercises the parents will go away pleased, both from the fact that they have witnessed improvement in their children, and because they, too, leave the place wiser than they came to it.

The exercises of a public examination should partake largely of a practical character. Let them not be book recitations merely, but explanations and applications of principles. The teacher should not be so anxious to make a great display as to allow himself to give an exhibition of superficial recitation.

It would be well if the trustees, or some suitable persons in the district, could conduct a portion of the examination, by which means not only variety would be given, but it would afford an excellent opportunity to test the thoroughness of the teacher's instruction. These examinations would also tend to break up that diffidence so common on the part of pupils, in our country schools, when reciting in the presence of visitors.

The exercises should be enlivened by singing, reading of compositions, declamation, etc. And it would be well to close by a short address to parents and children, from some person previously invited for this purpose. With such examinations at the close of each term, the interest in common schools would be increased in the minds of parents; teachers would feel that they had something to do; children would learn to prize knowledge more highly, and better

teachers, better schools, and better scholars would be the result.

### VENTILATION OF SCHOOL-HOUSES.

THIS is a subject of *vital* importance to both the teacher and the taught in our common schools. Want of proper attention to this subject is a source of great evil. In some schools the temperature of the room is regulated, if regulated at all, by the changeable feelings of the teacher, or perhaps the notions of the pupils. In such cases it is not unfrequent to find the room varying in temperature, during a single half day, from 40 to 90 degrees, whereas it should range only from 60 to 70. And in these instances the heat is more frequently 80 or more, than 70 or less.

No wonder that so many teachers complain of ill health, and suffer so severely from exposure to cold, when they allow themselves to live in such a temperature, and that, too, when surrounded by two or three score of lungs to render the air impure! We believe that the principal cause of the ill health of most teachers may be traced to confinement in too warm and ill-ventilated school-rooms.

It requires but a short time for the number of pupils usually assembled to use up all the air in the room, or render it entirely unfit for respiration; hence the necessity of a ventilation by which the impure air may escape, and fresh air be admitted.

The ventilation should be through an opening in the ceiling overhead, or by lowering the upper sashes of the windows, or by both. The sudden exposure caused by opening the door, or by raising the lower sash, is very injurious; besides, it does not rid the room of the vitiated air which rises in the upper part of it.

We say again, this subject is one of vital importance, for it involves the health and well-being, not only of the teacher, but of the fifty or hundred children under his charge. **TEACHERS** and **PARENTS**, we beseech you to attend to this matter. See that your school-rooms are properly ventilated, and that the temperature is regulated, not by the changeable feelings of the teacher or pupils alone, but by a thermometer hung in some suitable place in the room.

THE DAGUERREIAN JOURNAL, by S. D. HUMPHREY, No. 235 Broadway, New York, is improving with its growth. Every Daguerreian artist in the land should take it. Published semi-monthly, octavo, 32 pages Terms \$3 per annum, in advance.

## NOTICES OF PUBLICATIONS.

**VIEWS OF THE MICROSCOPIC WORLD.** Designed for general reading, and as a hand book for classes in Natural Science. By JOHN BROCKLESBY, A. M., Professor of Mathematics and Philosophy in Trinity College, Hartford, Conn. Octavo; 146 pages. Illustrated with numerous engravings and drawings. Published by Pratt, Woodford, & Co., No. 4 Courtland Street, N. York. 1851.

This book unfolds in the works of nature, which are hidden from the unassisted eye, much that is exceedingly interesting. It is the result of extensive personal observation, united with a vast amount of reading and practical research, and illustrated with several hundred beautiful engravings and drawings. The teacher will find in it a vast fund of interesting and useful information to impart to his pupils in the form of brief lectures. It will also prove a highly interesting work to the general reader, giving sublime views of the life-teeming world around and beneath him. See extract from it on the 137th page.

**THE PLANETARY AND STELLAR WORLDS;** a popular exposition of the great discoveries and theories of Modern Astronomy. In a series of ten lectures. By O. M. MITCHEL, A. M. 12mo; pp. 336. Published by Baker & Scribner, 145 Nassau Street, New York.

We know of no American astronomer who has clothed the science of the stars in such attractive and eloquent language as has Prof. Mitchel in his lectures; and those only who have read them, or have had the pleasure of listening to his glowing eloquence on this subject, can imagine what is their style. These lectures will prove highly valuable to the teacher of astronomy, and deeply interesting to the student or general reader who wishes information on this subject.

**HOME BALLADS; A Book for New Englanders.** In three parts. By ABNEY ALLIN. 12mo; pp. 238. Published by James Munroe & Co., Boston, and Cambridge, Mass.

Seldom has a work of a similar character fallen under our notice the perusal of which has afforded us so great a satisfaction as the one with the above title. There is a simplicity, life-like truthfulness, and ease in the author's style which the reader can not fail to admire, as it brings to mind the happy days of childhood, and makes him feel indeed young again. The productions are full of poetic genius, and so appropriately has the collection been called "Home Ballads," that while perusing them one seems almost to breathe the very air of home and the spirit of those New England scenes.

**SALAZAR AND THE DRAGON; A Romance of the Hartz Prison.** By Frederick W. Shelton, M. A., Rector of St. John's Church, Huntington, Long Island. 16mo; pp. 184. Price 50 cents. Published by Samuel Hueston, 139 Nassau Street, and George P. Putnam, 155 Broadway, New York.

We acknowledge that on first reading the title of this book the impressions that struck us were not prepossessed in favor of it, but a perusal of the beautiful story quite changed those thoughts. It is an allegory, the object of which is to exhibit the pernicious effects of evil speaking and slander, and the danger of uttering or lending ear to an unkind word or an insinuation. There has hardly appeared a more ingenious and useful allegory than this since the days of Bunyan.

**THE ISLAND WORLD OF THE PACIFIC;** being the personal narrative and results of travel through the Sandwich or Hawaiian Islands, and other parts of Polynesia.

By Rev. Henry T. Cheever. 12mo; pp. 404. Published by Harper & Brothers, New York.

Owing to the increasing relations between the Sandwich Islands and the United States, this work must be received with much interest. It presents a correct picture of the Pacific Islands as they appeared in the year 1850; and since any previous work on the Polynesian Islands has been written, great changes have taken place there. The author tells us what he saw, and what he thought and felt while seeing.

**NEW ELEMENTS OF GEOMETRY.** By Seba Smith. Octavo; 200 pages. Published by George P. Putnam, 155 Broadway, New York.

This treatise is divided into three parts; namely, The Philosophy of Geometry, Demonstrations in Geometry, and Harmonies of Geometry. A fundamental principle in Geometry, as laid down in this work, is, that there is but one kind of quantity, and that solids, surfaces, and lines all have the same unit of comparison, and must also be measures of each other. The author says a unit in Geometry is always a cube, and that it is one in length, one in width, and one in thickness; that a line is a succession of single units, hence a line is one in breadth and one in thickness; that a surface is composed of a succession of single lines, and therefore has a thickness of one. But this unit may be of any positive magnitude, from magnitude infinitely diminished to magnitude infinitely extended.

By the theory of these new elements, Mr. Smith proves that the same relations exist in cubic quantity, between solids, surfaces, and lines, that exist mathematically—a relation which old geometers do not admit.

The author does not claim to have changed any principles of Geometry—they are immutable, and ever remain the same—but to have changed the definitions to make them agree with new discoveries in these principles. The work shows ability, profound research, and a noble freedom of thought, which can not fail to attract the attention of those who are fond of investigation in the natural sciences.

**CHRISTIAN MELODIES;** a selection of hymns and tunes, designed for social and private worship in the lecture room and the family. Edited by George E. Cheever, D.D., and J. E. Sweetser. 12mo; pp. 252. Published by A. S. Barnes & Co., New York, and H. W. Derby & Co., Cincinnati.

The hymns and tunes being arranged in one book, and classified according to the subjects, renders this a desirable work. The tunes are mostly old and familiar ones.

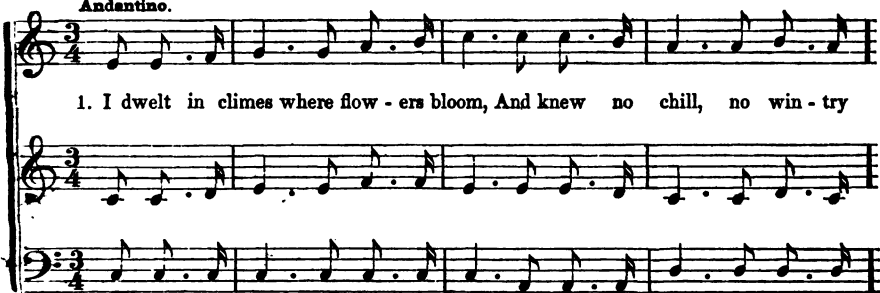
**THE PROPAGANDIST,** devoted to practical reform, especially in matters of self-education, but chiefly to the writing and spelling reformation, is issued every other Wednesday, in a quarto form, eight pages, Stephen P. Andrews editor, and published by John F. Trow, Nos. 49 and 51 Ann Street, New York. Terms, in advance, \$1 per annum.

A portion of this paper is printed in Phonotypy. It also contains lessons in Phonography. Probably no person in this country understands Phonography better than Mr. Andrews, and no one has done more for its extension. Let him continue to speed its progress.

**HARPER'S NEW MONTHLY MAGAZINE.** This work continues to increase in popularity, and its circulation has extended with a rapidity unrivaled in the history of magazines.

## THE BLUE BIRD'S SONG.—Trio.

Andantino.



tomb; A joy - ous land, where one might stay, But home, sweet home was far a - way.

2.

I sat upon the topmost bough  
At peep of dawn, as I do now;  
And tried to sing a cheerful lay,  
But no—'twas ever "far away."

3.

I loved that land of fruit and flowers,  
Where spring and summer twine their  
bowers,  
And gentle zephyrs round them play,  
But my birth-tree was "far away."

4.

Far north, where I was born and bred,  
My winged thoughts were ever fled;  
And spurning joys that round me lay,  
I sighed for pleasures "far away."

5.

Gay birds around sang many a song,  
And cheerful notes rang loud and long;  
But O, my heart turned every lay  
To plaintive airs of far away.

6.

The brook came laughing down the dell,  
Yet sad to me its joyous swell;  
And though its chime made others gay,  
I only thought of "far away."

7.

And now returned, how dear the hours,  
Though chill the wind and bare the  
bowers:  
Yet this is home—and that sad lay  
I sing no more of "far away."



## MULTIPLICITY OF STUDIES IN SCHOOL.

BECAUSE improvements have been made in teaching, and because youth now acquire a greater amount of knowledge at a specified age than was formerly attained, even at a much more advanced period of life, many of the community seem to entertain expectations altogether extravagant. It is needless to say that these expectations are seldom realized; and whenever they are realized, it is often at the expense of the health and even the life of the youthful prodigy. Numerous instances have occurred within the observation of the writer, to verify this assertion. School committees, parents, and teachers seem to overlook the great law of nature, that all healthy growth, whether in the physical, moral, or intellectual world, must be gradual, and in accordance with pre-established laws. The strength of the oak must be the result of many years; the enlarged humanity of Howard was the fruit of extensive observation, careful reflection, and oft-repeated self-denial; and the great genius of Newton or Laplace would never have been developed without long-continued exertion and profound attention.

That the growth of the youthful intellect be vigorous and healthy, the energies must be exerted on few things at a time, and those few must be studied faithfully, and, at least, somewhat extensively. But such is not generally the case. There are, indeed, exceptions, and among the most decided exceptions in this country, may be mentioned the Military Academy at West Point. The course there embraces comparatively few branches for four years' study, but those branches are thoroughly learned. True, the Government of the Academy wields a power which almost no other academical government has, or, at least, which almost no other presumes to exercise, the power to dismiss the indolent and inefficient. But, after all, concentration of energy is the most efficient means of success. Hence, the number of distinguished engineers and other eminent scientific men graduated at that institution.

But how is it with most of our colleges, academies, high and grammar schools, and even those of a lower grade, especially when these institutions depend upon popular favor for support? An array of studies is flourished abroad, sufficient to occupy one's lifetime; sometimes a single one of them would fill up threescore years and ten; and the tyro is expected to master the whole in a year or two. Such a splendid prospectus promises a rich and varied harvest, but it most generally proves to be a crop from a sand bank. Indeed, these liberal promises ought to be regarded as *prima facie* evidence of inefficiency, as presumptive proof that the amount really learned will be in the inverse ratio to the number of studies.

Let us look into the school-room, and see the operation of this multifarious system. The writer once visited an academy in which thirty recitations per day were heard by a single teacher; and they were just such recitations as might be expected—absolutely nothing. The pupils were merely asked if they found any difficulties, and it may be inferred that they found very few, for it was asking the blind to distinguish colors, or the deaf to detect a discord in music. Under such a system, the learner is hurried from one thing to another; no time is left, for reflection no opportunity for research and in-

vestigation; truth and error are strangely confounded; what is attained is learned by rote; and, what is most to be deplored, the youth imagines that he has sounded the whole depth of a subject, when his eye has merely floated over its surface. Hence, conceit, the offspring of ignorance, the bane of all progress, is early implanted in the mind, and can be eradicated only by severe disappointment and mortification. The effect upon the teacher also is bad, especially if the same person has many branches to teach. He can neither devote the necessary time to self-preparation, nor expend sufficient labor in drilling to develop the abilities of his pupils. A smattering of the text-book is all that the pupil acquires, and the teacher's view is necessarily quite limited.

Now we do not object to learning many things, but we repudiate the idea that all can be profitably pursued at the same time, or that any considerable degree of acquaintance with all can be acquired in an inconsiderable space of time. Let so few studies be pursued at once that the student may become interested in each, that he may study each understandingly, and so thoroughly as to strengthen his powers, and give him such knowledge as will be of real and lasting service to him.

But, it is said, children ought not to leave school without having learned something more than the commonest branches of education; and it is better to learn a little of many branches than to be entirely ignorant of several of them. The correctness of such an assertion may well be doubted. This supposes that education terminates with the school-days, which may be, in a plurality of cases, practically true, but whenever true, it is a melancholy truth. Education, nay, book education, should be the business of life; and in this age and this country there is no good reason why it should not be co-extensive with life. If, then, youth are to make progress in learning subsequently to leaving the school-room, will they be more inclined to carry on the work after their curiosity has been sated by the knowledge of a few facts and elementary principles, after they have formed a vain conceit that they are masters of all good learning, or after they have acquired mental discipline and thorough knowledge as far as they have gone, and a conviction that there are many highly important and interesting branches of knowledge of which they are as yet profoundly ignorant? Facts are good arguments; and in the most difficult branches of study the writer has witnessed the most remarkable progress in pupils who had never heard of those branches until they were called to grapple with them. But it should be remarked, that all the preliminary steps had been taken with care, and a perfect knowledge of the way, so far as they had progressed.

Careful and thorough study generates strength; the novelty and freshness of a subject gives zest; curiosity is awakened and gratified; but since the powers of digestion and assimilation are vigorous and active, the appetite is renewed, and the result is, not only healthy, but rapid growth of the intellectual man. In short, we would say, let education embrace many subjects; but let it not be forgotten, that there is a time for every thing, and that every thing worth learning requires its appropriate amount of time and attention.—*The Massachusetts Teacher.*

# THE STUDENT.

## GREATNESS AND TRUE GLORY.\*

BY CHARLES SUMNER.

**G**OD ONLY IS GREAT, is the admired and triumphant exclamation with which Massillon commences his funeral discourse on the deceased monarch of France, called in his own age *Louis the Great*. It is in the attributes of God that we are to find the elements of true greatness. Man is great by the god-like qualities of justice, benevolence, knowledge, and power. And as justice and benevolence are higher than knowledge and power, so are the just and benevolent higher than those who are intelligent and powerful only.

Should all these qualities auspiciously concur in one person on earth, then we might look to behold a mortal, supremely endowed, reflecting the image of His Maker. But even knowledge and power, without those higher attributes, can not constitute true greatness. It is by His goodness that God is most truly known; so also is the *great man*. When Moses said unto the Lord, "Show me thy glory," the Lord said, "I will make all my goodness pass before thee."

If we pass in review the historic names to whom flattery or a false appreciation of character has expressly awarded the title of truly great, we shall find its grievous inaptitude. Alexander, drunk with victory and with wine, whose remains, after death, at the early age of thirty-two, were borne on a golden car through conquered Asia, was not truly great. Cæsar, the ravager of distant lands, and the trampler upon the liberties of his own country, with an unsurpassed combination of intelligence and power, was not truly great.

Louis the Fourteenth of France, the magnificent spendthrift monarch, prodigal of treasure and of blood, and panting for renown, was not truly great. Peter of Russia, the organizer of the material pros-

perity of his country, the murderer of his own son, despotic, inexorable, unnatural, vulgar, was not truly great. Frederick of Prussia, the heartless and consummate general, skilled in the barbarous art of war, who played the game of robbery with "human lives for dice," was not truly great.

Surely there is no Christian grandeur in their careers. None of the beatitudes showered upon them a blessed influence. They were not poor in spirit, or meek, or merciful, or pure in heart. They did not hunger and thirst after justice. They were not peace-makers. They did not suffer persecution for justice' sake.

It is men like these that the good Abbé St. Pierre, of France, has termed *Illustrious*, in contradistinction to *Great*. Their influence has been extensive, their power mighty, their names famous; but they were groveling, selfish, and inhuman in their aims, with little of love to God and less to man.

There is another and a higher company, who thought little of praise or power, but whose lives shine before men with those good works which truly glorify their authors. There is Milton, poor and blind, but "bating not a jot of heart or hope;" in an age of ignorance, the friend of education; in an age of servility and vice, the pure and uncontaminated friend of freedom; tuning his harp to those magnificent melodies which angels might stoop to hear; and confessing his supreme duties to humanity in words of simplicity and power.

"I am long since persuaded," was his declaration, "that to say or do aught worth memory and imitation, no purpose or respect should sooner move us than love of God and mankind."

\* Extract from "Fame and Glory," an oration before the literary societies of Amherst College.

There is St. Vincent de Paul, of France, once in captivity in Algiers—obtaining his freedom by a happy escape; this fugitive slave devoted himself with divine success to labors of Christian benevolence, to the establishment of hospitals, to visiting those in prison, to the spread of amity and peace—unknown, he repaired to the galleys of Marseilles, and, touched by the story of a poor convict, personally assumed his heavy chains, that he might be excused to visit his wife and children.

When France was bleeding with war, this philanthropist appears in a different scene: presenting himself to her powerful minister, the Cardinal Richelieu, on his knees, he says, "Give us peace; have pity upon us; give peace to France."

There is Howard, the benefactor of those on whom the world has placed its brand, whose charity, like that of the Frenchman, inspired by the single desire of doing good, penetrated the gloom of the dungeon, as with angelic presence. "A person of more ability," he says, with sweet simplicity, "with my knowledge of facts, would have written better, but the object of my ambition was not the fame of an author—hearing the cry of the miserable, I devoted my time to their relief."

\* \* \* \* \*

Such are some of the exemplars of true glory—without rank, office, or the sword, they accomplished immortal good. While on earth, they labored for their fellow-men; and now, sleeping in death, by their example and their works, they continue the same sacred office. To all, in whatever sphere or condition of life, they teach the same commanding lessons of magnanimous duty.

From the heights of their virtue they call upon us to cast out the lust of power, of office, of wealth, of praise, of a fleeting popular favor, which "a breath can make, as a breath has made;" to subdue the constant, ever-present suggestions of *self*, in disregard of those of neighbors, near or remote, whose happiness should never be absent from our mind; to check the madness of party, which so often, for the sake of success, renounces the very object of success; and, finally, to introduce into

our lives those lofty sentiments of *conscience* and *charity*, which animated them to such god-like labors.

Nor should these be mere holiday virtues, marshaled on great occasions only. They must become a part of us and of our existence; ever present in season and out of season, in all the amenities of life; in those daily offices of conduct and manner which add so much to its charm, as also in those grander duties whose performances evince an ennobling self-sacrifice. The first are as the flowers, whose odor is pleasant, though fleeting; the latter are like the precious ointment from the box of alabaster poured upon the head of the Lord.

To the supremacy of these principles let us all consecrate our best purposes and strength. So doing, let us reverse the very poles of the worship of past ages. Men have thus far bowed down before stocks, stones, insects, crocodiles, golden calves, graven images, often of cunning workmanship, wrought with Phidian skill, of ivory, of ebony, of marble—but all *false gods*. Let them worship in future the true God, our Father as he is in heaven, and in the *beneficent* labors of His children on earth.

Then farewell to the syren song of a worldly ambition! Farewell to the vain desire of mere literary success or oratorical display! Farewell to the distempered longings for office! Farewell to the dismal, blood-red phantom of martial renown! Fame and glory may then continue, as in times past, the reflection of public opinion; but of an opinion, sure and steadfast, without change or fickleness, enlightened by those two suns of Christian truth—*love to God and love to man*.

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[*Massillon* was one of the most eloquent pulpit orators of France. He died in 1742. *Alexander the Great* was born 356 years before Christ. He ascended the throne in his twentieth year, and soon engaged in wars of conquest, which were continued till he had subdued most of the then civilized world. He died in the city of Babylon, B.C. 323, from excessive drinking of wine. *Phidian*, relating to the skill of Phidias, the great Athenian sculptor, who flourished about B.C. 450.]

## THE BLIND MOTHER.\*

BY ABBY ALLIN.

SAY, shall I never see thy face, my child?  
My heart is full of feelings strange and wild;  
A mother's hopes and heart-felt joys are mine,  
My soul is filled with gushings half divine;  
And never more, my child, am I alone,  
Since thy young heart doth echo to mine own.

But shall I never see thee? can it be  
That all may gaze, my precious boy, on thee,  
And yet the heart that loves thee most, forego  
The dearest pleasure other mothers know?  
This, this is anguish—agony refined!  
O God, forgive me! baby, I am blind!

Yes, yes—I never, never knew before,  
The depth of my affliction—oh, for power  
For one short thrilling moment, child, to gaze  
On thy sweet tiny face, that others praise;  
And yet I must not murmur; God is kind;  
But *this is darkness*—now I *feel* I'm blind!

Nay do not start, my child, it was a tear  
That wet thy brow; thy mother, boy, is here;  
And though I may not see thee, yet I feel  
Thy velvet cheek against my bosom steal;  
And none can harm thee there, nor hand unkind  
Shall touch my darling, even though I'm blind!

List! list! it is thy father's step I hear;  
Now let me smooth my brow, press back the tear;  
He shall not find me weeping, when so blessed  
With thee, my darling, cradled on my breast;  
But could I only see thee! Yet God's will  
Be done! Peace, throbbing heart, be still!

We are alone again; he never guessed  
What yearning anguish filled thy mother's  
breast,

When he did praise thy features half defined,  
He quite forgot that his young wife was blind!  
And yet, when his fond arm was round us thrown,  
His lip half trembled when it met my own.

Oh, should he e'er repent him he hath wed  
A being burdened with a woe so dread;  
Should he grow tired of one so frail and weak,  
My heart, in that dark hour, would joy to break;  
Or should his lip grow cold, his hand unkind,  
God help me, baby, then indeed I'm blind!

But shall I never see thee? Yes, my boy,  
Some future hour my heart shall know that joy;

It may not be on earth, but in the skies,  
I yet shall gaze, my darling, in thine eyes;  
So I will patient be, for God is kind,  
For in yon heaven not one eye is blind!

## RAIN ON THE ROOF.

WHEN the humid shadows gather  
Over all the starry spheres,  
And a melancholy darkness  
Gently weeps in rainy tears,  
'Tis a joy to press the pillow  
Of a cottage-chamber bed,  
And to listen to the patter  
Of the soft rain over head.

Every tinkle on the shingles  
Has an echo in the heart,  
And a thousand lively fancies  
Into busy being start;  
And a thousand recollections  
Weave their bright hues into woof,  
As I listen to the patter  
Of the soft rain on the roof.

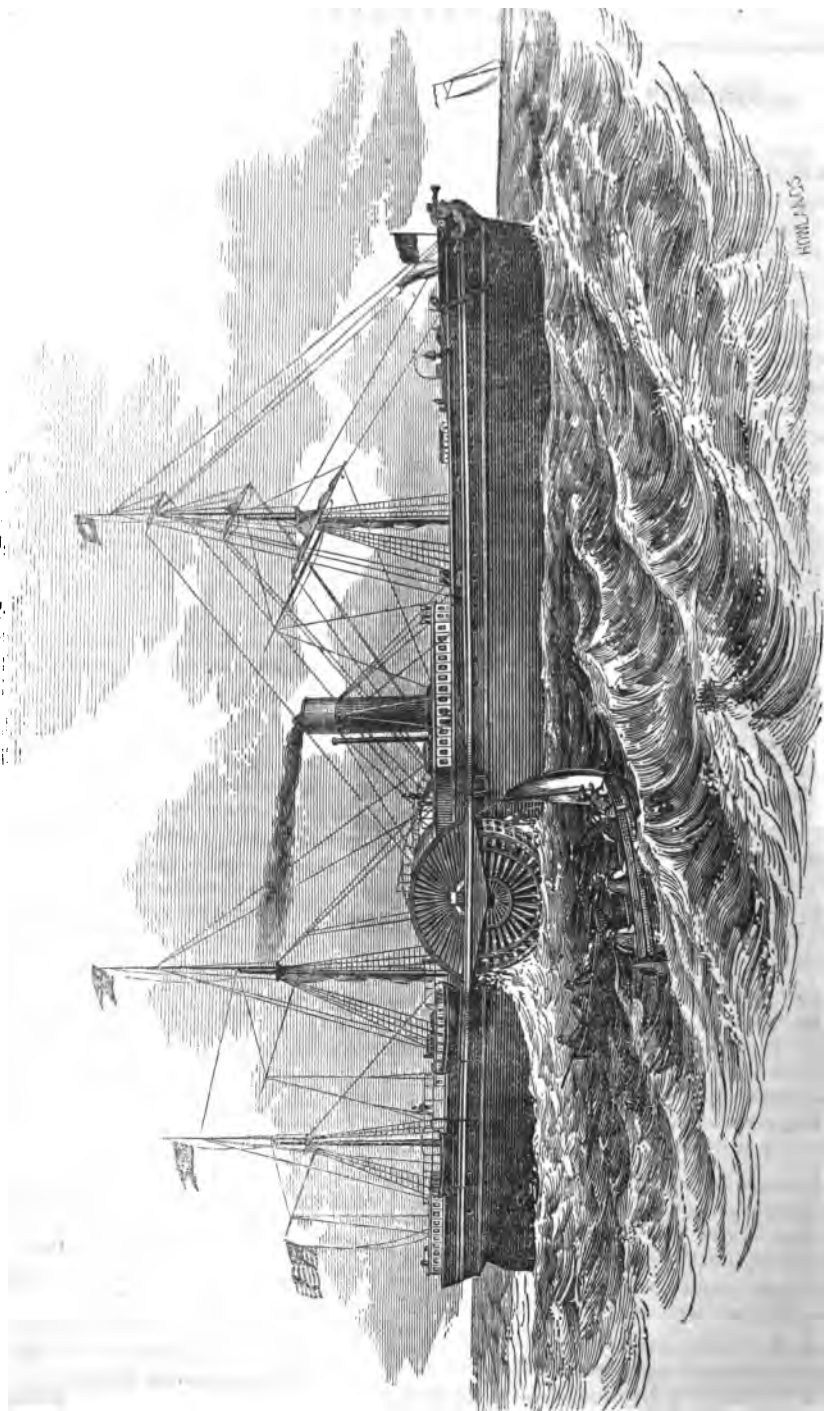
There in fancy comes my mother,  
As she used to, years ago,  
To survey the infant sleepers,  
Ere she left them till the dawn.  
I can see her bending o'er me,  
As I listen to the strain  
Which is played upon the shingles  
By the patter of the rain.

Then my little seraph sister,  
With her wings and waving hair,  
And her bright-eyed cherub brother—  
A serene, angelic pair—  
Glide around my wakeful pillow,  
With their praise or mild reproof,  
As I listen to the murmur  
Of the soft rain on the roof.

There is naught in art's bravuras  
That can work with such a spell  
In the spirit's pure, deep fountains  
Whence the holy passions swell,  
As that melody of nature—  
That subdued, subduing strain,  
Which is played upon the shingles,  
By the patter of the rain.

Selected.

\* From "Home Ballads." See notice in the March number, page 158.



STEAMSHIP ATLANTIC.

## THE STEAMSHIP ATLANTIC.

**T**HIRTEEN years have passed since the Atlantic Ocean was crossed for the first time by vessels propelled exclusively by steam. Pioneers in this great achievement were the English steamships *Sirius* and *Great Western*; the first of these, however, was built for other purposes, but the latter was intended expressly for crossing the Atlantic.

This was the beginning of a new era in steam navigation. Other steamships soon succeeded, and new lines were established, until at the present time there are no less than five lines of ocean steamers, numbering in all twenty-six steamships. That we may obtain a definite idea of the noble enterprise, let us take a nearer view and survey one of these monarchs of the ocean.

The accompanying engraving is an excellent representation of the American steamship *Atlantic*. This vessel was built in the city of New York, and set out on her first trip for Liverpool on the 27th day of April, 1850. She was the pioneer of "Collins' United States Mail Line," between New York and Liverpool, and has since been joined by those three worthy consorts—the *Pacific*, *Baltic*, and *Arctic*, which are soon to be succeeded by the *Adriatic*.

The steamship *Atlantic* is 284 feet in length; 45 feet breadth of beam, and 75 feet in breadth across the paddle-boxes. The depth of her hold is 31 feet and 11 inches; the diameter of her wheels 36 feet; and her burden 2,845 tons, which is about 500 tons more than the largest English steamship.

The machinery which propels this steamship consists of two engines, each of 500 horse-power. Such cylinders, and shafts, and pistons, and beams are unrivaled. There are four boilers, each heated by eight furnaces, in two rows of four each. These consume about fifty tons of coal every twenty-four hours. And when we remember, too, that she can carry 900 tons of coal in her bunkers, we do not wonder that an engineer should exclaim, "That is walking into a coal mine pretty fast."

The *Atlantic* has three low masts, with sails to be used when winds are favorable, and in case of accident to the machinery. She has no bowsprit, which, with her great bulk above the water, gives her a clumsy appearance, at first sight. Her wheels are placed as far behind the middle of the ship as they usually are before the middle in other steamships. Her sides are painted black, relieved by one long streak of dark red, inclosed in white lines.

Proceeding below we come to the drawing saloon, 75 feet long by 20 feet broad, and the dining saloon 65 feet long by 40 broad, separated from each other by the steward's pantry. These two saloons are fitted up in a very superior manner—rose, satin, and olive are the principal woods used; some of the tables are of beautifully variegated marble. The carpets are very rich, and the coverings of the sofas, chairs, etc., are of a superior quality.

The panels around the saloons contain beautifully-finished emblems of each of the States in the Union. The cabin windows are of stained glass, embellished with the arms of New-York, and other cities in the United States. Large, circular, glass ventilators, reaching from the deck to the lower saloon, are also richly ornamented, while handsome mirrors multiply all this splendor. There is not much gilding, and the colors are not gaudy, but the general effect is chasteness, elegance, comfort, and solidity.

The ladies' drawing-room is near the chief saloon, and is supplied with every luxury. Leading from the drawing saloon, as usual, are about 150 berths. Each berth has a bell-rope communicating with one of Jackson's Patent American Annunciators. This consists of a plate somewhat similar to a clock face, containing numbers corresponding to the numbers of the state-rooms. Each number is concealed by a semi-circular plate, which, as soon as the bell-rope is pulled in the state-room, will turn round and disclose the number corresponding to the one of the room where the rope was pulled. At the same time a bell is struck to call the attention of the stewards, who at once replace the plate in its former position and attend to the summons.

The helmsman is guided by the sounds of a bell: one bell means "port," two bells mean "starboard." In the engine-room there is a long box with five compartments, each communicating with a wire fastened like a bell-pull; these handles are marked respectively, "ahead," "slow," "fast," "back," and "hook on;" and whenever one of these is pulled by the commander on deck, a printed card with a corresponding word appears in the box, opposite the engineer, giving him a signal, and he acts accordingly. Thus there is no noise of human voices on board the ship, in the usual orders; the helmsman steers by his bells, the engineer works by his box telegraph, and the stewards wait by the annunciator.

This noble steamship is commanded by Captain West, and employs over one hundred hands, and carries a surgeon and a naval officer on board. The cost of this vessel was about \$850,000. A foreign writer says of her, "The steamer Atlantic is really worthy of the great country from which she came."

Only a few weeks have passed since deep anxiety was felt throughout the land for the welfare of the steamship Atlantic. On the 28th of December last, she left Liverpool for New York, with twenty-eight passengers, and her usual cargo. When she had arrived within 1,400 miles of her destined port, or about midway on her voyage, the main shaft broke and rendered her engines perfectly useless.

The sails were then put up and an effort made to reach Halifax, distant from them about 897 miles, but, owing to a strong head wind, the captain found the effort useless and put back for a European port. On the 22d of January the vessel arrived safely at Cork, Ireland, when the passengers proceeded to Liverpool, and re-embarked on the English steamship Africa.

During this time no tidings had been received of the Atlantic; and nearly fifty days had passed, after she left Liverpool, before any intelligence from her reached America. By many she was considered lost, and those who had friends on board nearly despaired of their return. But those mourning hearts were made to rejoice.

About 9 o'clock on the evening of Saturday, the 15th of February, New-York was startled by the firing of cannon, announcing the arrival of a steamship. Unusual numbers flocked to the Battery, and to the piers along the North River, hoping, though hardly venturing to hope, that some tidings came of the missing Atlantic.

As the steamship Africa was beheld approaching, amid the booming of cannon and the firing of sky-rockets, joy lighted up every countenance, for such an unusual display must betoken good news from the long-expected steamer. When the Africa neared her dock an officer mounted the upper deck, and shouted through a speaking trumpet, "THE ATLANTIC IS SAFE!" Instantly a tremendous burst of joy arose from the crowds on shore, and swelled long and loud upon the night air.

With almost telegraphic rapidity the intelligence spread throughout the city. Hardly an hour more had passed when the newsboys made the air vocal with the glad tidings. All night long, and until the hour of church the next day, did they continue to sound the good news—"The Atlantic is safe," through every part of the city. Seldom has New York been so universally affected with emotions of true joy as on that Saturday night.

## THE FROZEN SHIP.

**D**URING a period when so much anxiety prevails respecting the fate of Sir John Franklin, every thing relating to the Polar Regions is of interest. The following sketch, from the Westminster Review, is one of the most thrilling nature.

One serene evening in the middle of August, 1775, Capt. Warrens, the master of the Greenland, whaleship, found himself becalmed among an immense number of icebergs, in about 77° of north latitude. On one side, and within a mile of his vessel, these were closely wedged together, and a succession of snow-colored peaks appeared behind each other as far as the eye could reach, showing that the ocean was completely blocked up in that quarter.

furnish some of the best rice lands in the Union.

On leaving the low country, and proceeding toward the interior, we pass over a region of country from 50 to 60 miles in width, which presents an elevated level, sometimes termed the middle country. Succeeding this is a fine country of hills and dales, rising in the western portion of the state into mountains. The climate of the upper country is healthy at all seasons, but in the low country it is sickly during the summer months.

Cotton and rice are the staple productions of South Carolina, but the soil and climate are well adapted to raising tobacco and indigo. This last commodity was once produced in this state in large quantities, but it has given place to the more profitable crop of cotton.

The inhabitants of this state live in the midst of large plantations, and are thus separated from each other, so that it is almost impossible for the children to be assembled in schools, or for the people to sustain churches. Social intercourse is also very limited, yet there is much hospitality, leisure, and love of society.

It is probably owing to this separation of families that the state contains over 20,000 white persons who can neither read nor write. There are less than 130 academies and high schools in the state, and only about 600 primary and common schools. Besides these there are three colleges, three seminaries, and one medical institution.

The State of South Carolina contains about 270 miles of railroad, and 22 miles of navigation by canal. The elections are held on the second Monday in October, and the legislature meets the fourth Monday in November. The governor and lieutenant-governor are elected for two years, by the legislature, in joint ballot.

### GOD IN EVERY THING.

"THERE is a tongue in every leaf—

A voice in every rill—

A voice that speaketh every where—

In flood and fire, through earth and air!

A tongue that's never still."

### CURIOSITIES OF SCIENCE.

**T**HIS subject furnishes a vast field for interesting and valuable investigation. It presents hundreds of facts, familiar to the student of nature, which would astonish the ordinary reader. Some idea may be obtained of the interest connected with investigations in such a field by the following article from the Philadelphia Bulletin :

If a blackened card be placed upon snow or ice, in the sunshine, the frozen mass underneath will gradually melt ; while that by which it is surrounded is but little disturbed. If, however, the sun's ray, instead of falling directly on the card and snow, are reflected from a metal surface, an exactly opposite result occurs ; the exposed parts are the first to melt, and the blackened card remains standing high above the surrounding portion.

Another curious fact is, that if bars of copper, zinc, brass, and bell-metal are heated and placed so as to cool on blocks of lead, tin, or pewter, the bars are thrown into a state of vibration, and produce sounds similar to those of an Æolian harp.

A blacksmith will tell you that he can press heat out of a piece of iron, by simply beating it with a hammer, until, at last, he will render it red-hot and be able to light a match at it ; but he will add that the same piece can not be made red-hot again by hammering until it has been made red-hot in the fire, and brought back to its original expanded condition. The same principle which is at the bottom of this curious fact enables fire to be obtained by the friction of two pieces of wood.

Even unscientific readers are familiar with the fact that ice can be formed, in the hottest summer days, by chemical means ; but few are aware that water can be frozen in a vessel which is at a red heat. Yet this astonishing experiment has been frequently performed.

If a deep platina saucer is heated red-hot, and then water and liquid sulphurous acid, which has been preserved in the liquid state by a freezing mixture, is poured into the vessel, the rapid evaporation of the volatile acid, which enters into ebullition at



the freezing point, produces such an intense cold that ice is immediately formed, which can be used to cool water.

The experiments of jugglers have proved to all, that, under certain conditions, the hand can be immersed with impunity in melted metal. Little more is required than to rub the hands with soap, so as to give them a polished surface, then to plunge them into a cold solution of water and sal-ammoniac, and afterward to put them into the liquid iron, lead, bronze, or other metal, moving them rapidly through it, though not too rapidly.

The explanation of this curious fact is this. When the hand is plunged into melted metal the skin is not in contact with the metal, and, therefore, the heat incident upon the skin can arise only from that which is radiated from the metal. The moisture of the skin passes into the spheroidal state, and reflects the radiating caloric, so that the heat is never at the boiling point. Heat and light exhibit, through transparent bodies, a very remarkable difference. Transparent alum, which is as clear as the clearest water, transmits only twelve per cent. of heat; while rock crystal, which is not more lucid, transmits ninety-seven per cent. of heat. Black glass allows ninety per cent. of heat to pass through it; while green glass, colored by oxyd of copper, and covered with a layer of water, will, though perfectly transparent, almost entirely deprive the solar ray of heat.

On the principle of different colors the whole economy of nature, in reference to the absorption and radiation of heat by the various kinds of flowers and plants, is carried on. Says a late writer:

"Every tree spreading its green leaves to the sunshine, or exposing its brown branches to the air, every flower which lends its beauty to the earth, possesses different absorbing and radiating powers.

"The chalice-like cup of the pure white lily floating on the lake, the variegated tulip, the brilliant anemone, the delicate rose, and the intensely colored peony or dahlia have each powers peculiar to themselves for drinking in the warming life-stream of the sun, and for radiating it back again to the thirsting atmosphere."

Electricity also performs an important function in the growth of flowers, as is popularly known by actual experiment. In short, the world of science is full of curious facts, and not without a poetry of its own. Many an intellect that wastes its time in profitless mental speculations, or loiters life away in the perusal of trashy books, would find a new delight in tracing the wonder-working processes of nature, and learn, through revering nature, to adore nature's God.

### HOW THE EYE IS SWEEPED AND WASHED.

FOR us to be able to see objects clearly and distinctly, it is necessary that the eye should be kept moist and clean. For this purpose it is furnished with a little gland, from which flows a watery fluid (tears), which is spread over the eye by the lid, and is afterward swept off by it, and runs through a hole in the bone to the inner surface of the nose, where the warm air, passing over it while breathing, evaporates it.

It is remarkable that no such gland can be found in the eyes of fish, as the element in which they live answers the same purpose. If the eye had not been furnished with a liquid to wash it, and a lid to sweep it off, things would appear as they do when we look through a dusty glass.

Along the edges of the eyelid there are a great number of little tubes, or glands, from which flows an oily substance, which spreads over the surface of the skin, and thus prevents the edges from becoming sore or irritated, and it also helps to keep the tears within the lid.

There are also six little muscles attached to the eye, which enable us to move it in every direction; and when we consider the different motions they are capable of giving to the eyes, we can not but admire the goodness of Him who formed them, and has thus saved us the trouble of turning our heads every time we wish to view an object.

Although the eyes of some animals are incapable of motion—as the fly, the beetle, and several other insects—yet the Creator has shown His wisdom and goodness in

furnishing their eyes with thousands of little globules, and by placing their eyes more in front of their head, so that these little insects can see almost all around them without turning their heads.

A gentleman who has examined the eyes of a fly, says, that the two eyes of a common one are composed of 8,000 little globes, through every one of which it is capable of forming an image of an object! Having prepared the eye of the fly for the purpose, he placed it before his microscope, and then looked through both, in the manner of the telescope, at a steeple which was 299 feet high and 750 feet distant, and he says he could plainly see through every little hemisphere, the whole steeple inverted or turned upside down.—*Selected.*

## A BUSINESS EDUCATION.

BY NELSON SIZER.

**N**EARLY all the business men of 1870 are now boys in our public schools. If they are, in future, successful men, the education they are now obtaining will be found to have laid the foundation of that success. Many men fail in business from a deficiency of early training to habits of order, and attention to little things.

A merchant, for example, living in a distant part of the country, has a call for goods which he can sell to good advantage, if he can obtain them by a certain day. He writes to New York for the goods, incloses the money in his letter, which, we will suppose, is dated, "Washington, April 4th, 1851." He anxiously waits for his goods until the opportunity to sell them is past, and finds at last, to his mortification, that he neglected to write the county and state in which his Washington is situated.

The New York merchant is anxious to send the goods, but he finds that there are no less than *twenty-six* Washingtons in different counties and states of the Union, and does not know whether to send them to Alabama, Iowa, New Hampshire, or to either of the twenty-three other states which contain a town called Washington.

Suppose a large class of boys and girls

in a school desire to subscribe for the Student. They obtain the money from their parents and write to the publisher in New York, and simply head their letter as did the merchant; or perhaps they reside at Mount Vernon, of which there are *fifteen*; or Mount Pleasant, of which there are no less than *sixteen*; or Franklin, of which there are *twenty-three*; or Centerville, of which there are *twenty-one*; or from any other of the five hundred towns in the United States, of which there are from ten to twenty places of the same name.

How do the publishers know where to send the bundle of Students? They are obliged to wait until some more careful person writes to inquire after the books, or the money, and who does not forget to write in full the proper address of his letter thus:

"Mount Vernon, Kennebec County, Maine, April 4th, 1851;" or, "Mount Vernon, Montgomery County, Georgia;" or, "Knox County, Ohio," etc.

It would be well for teachers to impress the importance of giving the full address of a letter, upon the minds and practices of scholars, as a lesson in school. Every composition which is written should bear the entire address of the scholar.

Those who are never taught otherwise, do not appear to be aware that any other Chester, Washington, or Mount Carmel exists, besides their own, and suppose that a man in Boston or New York will know as well as the writer the particular place from which the letter is sent.

Large towns, like Boston or Portland, require the state, at least, to be appended, because in the United States there are *seven* Bostons besides the one in Massachusetts, and *nine* Portlands besides that in Maine.

**TO PARENTS.**—In early childhood you lay the foundation of poverty or riches in the habits you give your children. Teach them to save every thing, not for their own use, for that would make them selfish, but for some use. Teach them to share every thing with their playmates, but never allow them to destroy any thing.

## General Intelligence.

### THE GREAT ARTESIAN WELL OF BAVARIA.

THIS famous Artesian Well was commenced in 1829, at Kissengen, a city of Bavaria, situated in a saline valley, at about 1,000 feet above the level of the Baltic Sea. In June, 1846, after seventeen years of labor, the depth of 1,820 feet had been reached, and the workmen began to despair.

To penetrate to this depth it was necessary to cut through several beds of salt, separated by masses of granite. Then came a strata of carbonic acid gas, followed by new masses of granite. But the work went on, and finally a violent force knocked away the scaffolding which was erected over the well, and a column of water, nearly five inches in diameter, rose with prodigious force to the height of 100 feet, spreading then on all sides like the branches of a magnificent tree, and thus forming a most extraordinary jet of water.

The water, clear as crystal, comes from a soil of a temperature of sixty-six degrees Fahrenheit, and gives a volume of about 425 cubic feet a minute. It is forced by a subterranean atmosphere of carbonic gas, acting with the force of fifty ordinary atmospheres.

**CALIFORNIA ITEMS.**—The city of *San Francisco* has a population of about 27,000 inhabitants. No less than seven daily papers are issued there. Six months ago it did not contain a single brick house; now it has more than sixty. It has seven miles of its streets planked. The new church of the First Presbyterian Society has been dedicated and opened for public worship.

**Sacramento City.**—The directory recently published there contains a list of nearly 100 practicing physicians; 90 lawyers; 50 hotels; 40 boarding-houses; 7 churches; 2 Sabbath-schools; 3 printing-offices; and 4 theaters.

The present capital of California is San José. Some of the citizens of that state are making an effort to have the capital removed to Vallejo.

**OREGON.**—Coal has been found near Puget's Sound, which is said to be of an excellent quality.

The first steamboat built in Oregon was launched at Milwaukie on last Christmas day.

**CHEAP POSTAGE.**—A law was passed during the session of the last Congress reducing the

postage on all letters not exceeding one half ounce to *three* cents when pre-paid, and *five* cents if not paid at the office where mailed, for any distance not exceeding three thousand miles. This law will take effect on the first of July next.

**A NEW COIN.**—A law was also passed by Congress, authorizing *three-cent* pieces to be coined. They are to be composed of silver and copper.

**MISS DIX.**—This celebrated philanthropist, whose labors are spent for the benefit of the insane, is preparing to visit the prisons in Virginia, North Carolina, and Georgia, during the coming summer, to relieve those who seem almost given up to misery by the rest of mankind.

**JENNY LIND** is expected to resume her concerts in New York about the 25th of this month. She has been giving a series of concerts, since her return from Havana, in New Orleans, St. Louis, and other large Southern and Western towns.

**SCHOOLS IN EGYPT.**—The Viceroy of Egypt has established schools at Chartoum, in Nubia, 16° north latitude.

**TELEGRAPH FROM CALAIS TO DOVER.**—The submarine telegraph between Calais and Dover will probably be ready for operation again early in May.

**HINDOO MARKS OF CASTE.**—The Hindoos in Bombay paint a mark on their foreheads, indicating their caste, or rank in society. Some of these marks are horizontal lines, either white, red, or yellow; some a round spot about the size of a sixpence. These marks are painted fresh every day.

**HISTORY OF THE RESTORATION.**—It is said that the celebrated French writer, Lamartine, has recently engaged to write a "History of the Restoration," comprising eight or ten volumes, for which his publishers agree to pay him at the rate of \$10,000 for each volume.

**PILGRIMS TO MECCA.**—Every person who believes in the religion of Mohammed is required to visit Mecca once during his life. This is believed to be the birth-place of Mohammed. Immense numbers go there every year from all parts of the Mohammedan world. During last year a vast number of these pilgrims died of cholera.

## Youth's Department.

"To pour the fresh instruction o'er the mind,  
To breathe th' enlivening spirit, to fix  
The generous purpose, and the noble thought."

### A WORD FITLY SPOKEN.

BY MISS ELIZA A. CHASE.

**MR. WILSON** sat in his office one afternoon conversing with his neighbor, Mr. Denton. "How is your patient, young Selwyn?" asked the latter.

"Better, though still in a very critical condition. Poor fellow! his mind dwells on his losses, and this keeps him down. How singular that the loss of property should so prostrate a man! The world has dealt leniently with him, pity it should not with others. This is the first real misfortune he has ever known, and it proves too much for him."

"Nay, doctor, there is a greater misfortune, one which lies far back of this, and which is the cause of all the others. You say truly, the world has dealt leniently with him, too leniently. He has been enervated by prosperity, till, like a hot-house plant, he sinks before the rude blasts of adversity, to which he should have been subjected in youth."

"But surely, Mr. Denton, you would not have mankind hardened by adversity till they become insensible to its shocks?"

"By no means; but I would have them strengthened by it, till they become invincible by its assaults. The tree exposed to the blast strikes its roots more deeply into the soil, and laughs at the coming storm. George Selwyn was reared in luxury. His energies were never tasked, his powers of endurance never developed; he had but to put forth his hand and pluck from the trees others had planted.

"This was his greatest misfortune. A little privation, a few disappointments, would have taught him a salutary lesson; and a short term in the school of adversity, that severe but invaluable teacher, would have saved him from his present troubles."

"I can not quite agree with you. I believe in affording every facility to the young. Many a noble spirit has been crushed in the struggle of life."

"No doubt of that, doctor, but still I think my position a correct one. I believe that genius will manifest itself wherever it exists. It is impossible for education or advantages to create intellect; but if a person possess talent, rest assured it will make itself known. Indeed, I go so far as to believe that he who deserves will surely win, and he who does not succeed does not deserve success.

"Columbus, with his weary child at the gate of the convent, was no less a discoverer than at his gorgeous reception by his crowned patrons. Luther, singing for his bread, was a reformer. Franklin, preparing candle-molds, a philosopher; Euclid, with his rough board and piece of charcoal, a mathematician; and Ferguson, tending sheep on his native mountains, an astronomer."

"But you will not deny that among the thousands who live and die, and are known no more, there may be some 'guiltless Cromwells,' some 'mute, inglorious Miltons?'"

"O no; but the number is comparatively small, smaller than is generally

supposed. I do not deny that many have sunk for want of means, but I hold that more perish from a superabundance of means.

"I claim that difficulties are necessary to call forth the energies and sharpen the intellect; that poverty and obscurity are favorable to the development of genius, and that eventually, and soon enough, fortune will smile on deserving effort.

"Was Scotia's sweetest bard less sweet when holding the plow in his native Ayr than when in Edinburgh surrounded by wealth and fashion? Does 'Mary in Heaven,' composed in the solitude of his rural home, or 'Bruce's Address,' by the deathless field of Bannockburn, touch the soul with less pathos than the songs written in the zenith of his fame?"

"Well, perhaps you are right, Mr. Denton; but I am sure prosperity is very comfortable to the feelings, if not advantageous to the intellect;" and no one who looked on his portly dimensions, and smooth, good-natured face, would suppose for a moment that the ease-loving doctor had met with aught than the prosperity he so much coveted.

Taking down a prescription, he said, "Alfred, I wish you to deliver this as directed." The individual addressed was a boy some fourteen years of age, who was sitting in the back part of the room, with his elbows on the table, his head resting on his hands, and an open book at some distance before him.

He did not seem to notice the request, which was repeated with the same success as before. "Alfred, are you asleep?" said the doctor, impatiently; and, starting, the boy turned his head, saying, "Did you speak to me, sir?" The good-natured doctor laughed, and replied, "When you have shaken off your dream you may deliver this parcel."

With a flushed cheek, sparkling eye,

and compressed lips the boy took the parcel and left the office.

"A fine-looking boy, that," said Mr. Denton; "who is he?"

"His name is Alfred Lincoln," replied the doctor, "and according to your theory he ought to show genius, if he has any, which I very much doubt. His father died of consumption not long since, after an illness of three years, and his mother survived but a short time. They were in the most destitute circumstances, and were supported principally by the exertions of Alfred.

"A few weeks since I hired him to take care of the office, and I allow him the use of my library, for he is exceedingly fond of books. But he is a strange boy; I sometimes think him stupid. His mind is on something aside from his work, for I have often found him standing by the door, his arms folded, his eyes fixed on some distant object, and utterly insensible to all that was passing around him."

"Is he faithful in his duties?"

"A perfect model of fidelity."

"And honest?"

"I would trust him with untold sums."

"Industrious?"

"He does all I require of him, but he often has these stupid fits, such as you just saw."

Mr. Denton recalled the broad, beautiful forehead, the bright eye and intelligent look of the boy, and thought him any thing but stupid. His curiosity was much excited, and he plainly saw that the thoughtless but kind-hearted Dr. Wilson had entirely mistaken the character of the youth, and further acquaintance only served to confirm this opinion and strengthen the partiality which he had felt for him at the first sight.

Dr. Wilson had described Alfred correctly in all things, except in calling him stupid. Reared amid the

most extreme poverty, his life had been one of unremitting toil and care; yet even in his darkest hours, he felt within him a voice that bade him hope for better things—a spirit that was constantly striving to burst the barriers that confined it.

The words of Mr. Denton had fallen upon him as words had never done before. At first the conversation had been unnoticed by Alfred, but as it proceeded he became interested, and the expressions “genius will manifest itself wherever it exists,” and “he who deserves will surely win,” had transformed him, while the remainder of the conversation made him regard Mr. Denton as little less than an angel of light.

His path was clear; he felt that he did deserve, and that he could win. He applied himself faithfully to his studies, was scrupulously exact in all his duties, and when the time of his engagement with Dr. Wilson had expired he went to Mr. Denton, and, asking an interview, he stated his case plainly and briefly.

He recalled the memorable conversation, and said that this had been the turning point of his life. He did not aspire to fame and high station, but he could not rest in ignorance and obscurity; he was penniless, and wanted a little assistance; he would work till he could repay him for all he might do for him; he was willing to struggle, but he could not sink, and he felt, he knew not why, a strange confidence in Mr. Denton.

And most fatherly was the care of that noble-hearted man. He aided, encouraged, and advised the boy, and teaching him to rely on himself, he prepared him for the realities of life, to meet and subdue its trials as becomes a man and a Christian.

Alfred Lincoln is now in mature years. He has ever led a private life, and though unknown to what the

world calls fame, there rise for him the daily prayers of widows and orphans to whom his presence has been a blessing, and whose hearts he has made “to sing for joy.” No costly marble blazons forth his deeds, but young men raised from poverty and dejection to prosperity and happiness stand a better and living memorial of his worth.

The meteor light of glory which too often rises from battle fields and burning cities is unworthy of comparison with that holy radiance which gleams from virtuous deeds, however humble. The one is an *ignis fatuus* that “leads to bewilder, and dazzles to blind;” the other a heavenly ray that brightens on earth and beams through all eternity.

## ASTRONOMY,—NO. II.



SIR WILLIAM HERSCHEL.

## THE STARS, THEIR HISTORY AND LAWS.

BY CAROLINE L. PIERSON.

MARY GRAHAM and her little pupils were again assembled. As the stars had not yet made their appearance, Mary was reminded of the history and picture of Herschel, which she had promised. The portrait was duly examined, when Mary commenced:

"In 1759, nearly one hundred years since, there went a poor youth from Hanover, in Germany, to Halifax, in England, seeking employment, and hoping to meet a brother who had gone over some time before. A stranger in a strange land, struggling with poverty, his spirit would often have sunk had he not possessed a taste for reading and a talent for music.

"His father's circumstances being poor, he had been able to give his sons only a scanty education; but William Herschel's skill as a musician soon attracted attention, and he was appointed to the leadership of the band of a regiment in the north of England. This was the humble beginning of him who afterward stamped his name in glittering characters upon the heavens.

"At length an organist being wanted in Halifax, he received the appointment. There, devoting himself to the study of music, he was gradually led into mathematics, and thence to the higher application of that science to the heavenly bodies."

"So it appears," said Ellen, "that both music and astronomy are based upon mathematics, and that all are connected and lead into each other."

"You speak very truly," said Mary, "and you can well imagine the rapture he felt, when by applying his knowledge he made some of his wonderful discoveries. Music had been his occupation, and by studying its science he arrived at principles which led him to the heavens for their verification; thus his earthly melodies found in the choir of the heavenly hosts full and majestic harmonies, which have continued to swell louder and louder with the discoveries of his successors.

"Herschel added another to the seven planets then known, which had been symbolized among the ancients by the seven-stringed harp of Apollo;

thus, as Campbell says, he 'yielded the *lyre* of heaven another string.'

"He did not confine his observations to the sun and the few planets that move round it; neither did the heavens which we see satisfy him; but he penetrated far into space and discovered orb beyond orb at distances which the unassisted eye could never reach."

"What enabled him," asked Rosa, "to so far excel others?"

"The telescope," said Mary, "which he greatly improved. Being unable to buy one, he set about constructing one for himself, and he made no less than two hundred metallic mirrors before he reached the power at which he aimed. You probably recollect learning, in your Natural Philosophy, the principles on which the telescope is used?"

"Yes," said Eliza; "there are different kinds, and Herschel's was the reflecting. This consists of a tube in which is placed a metallic concave mirror. Now this mirror collects the rays of light as a new tin oven does the rays of heat, and by making them meet at one point sooner than they would otherwise do, increases their power; for this reason the images of near objects are magnified, and invisible objects are brought to view."

"Herschel," said Mary, "placed such a mirror in his tube, and then directing it toward the part of the heavens he wished to examine, and looking down into it, he there saw reflected a starry host which human eye had never before witnessed."

"Sister Mary," said Ellen, "the stars are twinkling in all parts of the heavens; let us walk upon the porch and look at them while you tell us about the discoveries of our new friend."

"You all," said Mary, "see that belt of whitish light extending across the sky, from northwest to southeast;

it stretches as a band quite around the heavens, part of the portion which we see in summer dividing itself into two branches."

"It is the Milky Way," said Nancy; "and I recollect reading in my Mythology that the Greeks called it Galaxy, from its whiteness. Some of them supposed that it was the road which the gods traveled when they attended the court of their great Jupiter, and that it led directly to his throne. Others thought that the sun, as the god of day, was drawn in a flaming phaeton by fiery steeds around the heavens, and that the Milky Way had once been his path, and was still reflecting some of his scattered beams."

"The Milky Way," said Mary, "remained a mystery until Herschel sounded the heavens with his far-reaching instrument; it was an object of great interest to him, and his observations upon it may be said to have afforded a key to the science of Astronomy. But tell me, girls, how many stars you see shining above?"

"Why, millions," answered Rosa; "I do not think I could count them."

"You are mistaken," said Mary. "By glancing the eye over the heavens, so many sparkling points deceive you. Now look steadily, carefully counting, and you will find the number in a given space much less than you suppose."

"In our last conversation you learned that the heavens had been divided into constellations, to which names were given. Astronomers are as familiar with the number of stars in all the groups as a political office-seeker is with the number of voters in every county. You can not take a position where the heavens present more than 1,500 stars in the brightest night."

"The peculiar whiteness of the Milky Way is caused by numbers of stars lying in that direction, at too great distances for the eye to detect;

we therefore only get the mingled light. In the daytime when you look around, you see distinctly different kinds of trees; as you look on you still see trees in the farther parts of the grounds, but they seem smaller and nearer together, and you can not tell a maple from a locust; extend your view still farther toward the east and west, and you see a blackish circle stretching around the horizon; this is of the same kinds of trees, but the distance mingles them, and you only see blackishness. Point a telescope to the horizon, and you will see distinct trees.

"By directing his instrument to that belt of whitish light in the heavens, Herschel often found the light in a small space resolved into more stars than you see shining. His great object then was to learn the form of this starry system."

"Did he think," asked Eliza, "that the stars are distributed in any regular order?"

"He did," said Mary, "and all his observations tended to prove that they are. He therefore boldly undertook the novel task of sounding or measuring the depths of the heavens."

"I may, by illustration, give you a faint idea of the process by which he did this. Were you in the midst of a grove of elms, which stretched in some directions beyond the reach of your eye, and in others was so shallow you could see the blue sky between the trees, you could determine the size and form of your grove by numbering the trees in straight lines to different points in its outer edge; where you could count the most trees, there would you say was the greatest depth, supposing in all cases that the trees were nearly equally distributed."

"A similar plan was Herschel's for measuring the heavens. He directed his telescope to different points, carefully noting the comparative depths

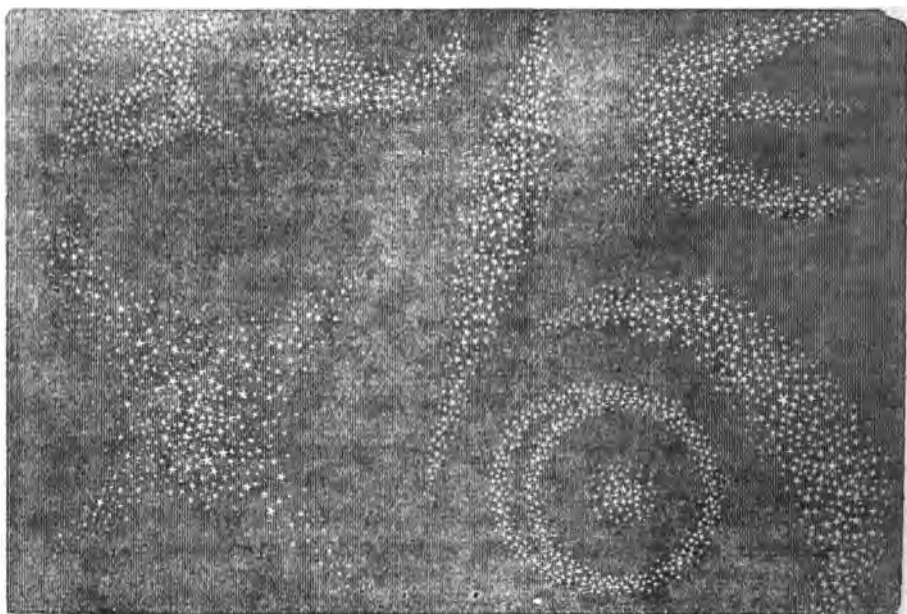


of the stars, and his conclusion was, that the Milky Way and all the stars visible to us constitute one system, shaped, as some one has said, something like a grindstone split about a third of the way through the center of its rim, to represent the two branches. The grains of sand in the rim of the stone well represent the Milky Way; and the rest of the heavens lying above and below this, including those stars visible to the naked eye, are represented in the flat surfaces of the stone. Our position is supposed

to be near the center of this circular system."

"Sister Mary," asked Ellen, "could he see any thing beyond all these stars in our cluster?"

"Yes," said Mary; "after he had cleared our universe he crossed unmeasured distances of space in all directions and found others, some similar to ours in form, and some very different. These, from their misty appearance, were called *Nebulæ* (clouds); some of them Herschel succeeded in resolving into stars, others he could not.



NEBULÆ.

"Here is a cut representing a number of the *nebulæ*; in some the stars are most numerous at the center, in others at the circumference. The lower one on the right-hand side may give you an idea of our stellar (starry) system, though it is intended to represent another which seems an exact image of our own, hanging at the outermost bounds of telescopic reach.

"So great are the distances of these

objects, that light is millions of years in coming from them to us; but they are supposed to be all related and harmoniously moving round some far-off center."

"Miss Mary," asked Nancy, "if we could go to one of these systems what would we see?"

"You would see," said Mary, "our own as the one we have mentioned appears to us, like a spot of star-dust,

dense at the circumference, but scattered toward the center. Should you chance to alight in a cluster where the reverse was the case, you would there see no Milky Way, but bright stars scattered over the whole heavens.

"There is nothing that gives a grander idea of God's almighty power in creation than this study of the 'Architecture of the Heavens.'"

"Sister," said Ellen, "I have, every bright evening since our last conversation, watched the constellation which you pointed out to us, and I find that now, the first of March, at six o'clock, Taurus is quite in the west, and new stars have risen and taken its place.

"To the east of this, and a little farther north, lying nearly overhead, are two bright stars about a yard apart; and in a southerly direction from these several other pair not so bright, all making a parallelogram. They follow in the path of Taurus."

"That is Gemini, the twins," said Mary. "They are called Castor and Pollux, and the two bright stars mark the head of each, the others their arms, legs, and feet. This constellation marks the position of the sun in June. You may recollect that it rises in that month from behind the church, where you have seen Gemini rising for some time past, much farther to the north than it does at any other time. This constellation has eighty-five stars.

"Observe, to the east of Gemini is quite a large space not marked by any brilliant stars: that is Cancer, the crab. By looking carefully, you can see near the center of this space a little spot of cloudy, white light, lying in the middle of a triangle composed of three small stars."

"I see it," said Ellen, "and it becomes very distinct by looking steadily. It must be one of the Nebulæ of which you told us."

"So it is," said Mary, "and a tele-

scope of very moderate power resolves it into stars. This constellation, in the time of the early astronomers, marked the northern limit of the sun, or the most northern point in which it ever rises, called the summer solstice, which it reaches about the 21st of June."

"I recollect," said Nancy; "we then have our longest days and shortest nights, and after that the sun continues to rise farther to the south, until after a time I am awakened in the morning by his glaring impudently into my face, and thus disturbing the good morning dream that I enjoyed when he quietly traveled up behind the church. This reminds me that they must have called this constellation Cancer (crab), because the sun's motion from this point is aptly represented by that animal, which travels backward."

"Miss Mary," said Eliza, "I thought you said, in speaking of Gemini, that the sun was farthest in the north when it rose with that constellation, and now I understand you to say the same of Cancer. Have you not made a mistake?"

"Very well, Eliza," said Mary; "I am glad you noticed this apparent contradiction; it shows that you remember what I say. About 2,200 years ago, when the sun's path through the heavens was first divided into constellations, Gemini occupied the place Taurus now holds, and Cancer the place of Gemini, and so on, each one of the twelve which marks the sun's path holding the place of the one which now lies to the west of it. These places of thirty degrees were called signs, probably because they marked off the seasons."

"So," said Eliza, "I understand there is no contradiction; the signs have remained the same while the constellations have apparently moved. The sun, therefore, is at the same time

in one sign and another constellation,  
as in June it is in the sign Cancer  
and the constellation Gemini."

"Miss Mary," said Nancy, "you  
have told us of so many wonders  
which we can not see, and stretched  
our thoughts so far, when we come  
back to look at that which we can see,  
our heavens do not look so large nor  
our stars so many in number as they  
did when you commenced talking."

"As you are so much interested,"  
said Mary, "we will meet again soon,  
and continue our conversations upon  
the heavenly bodies."

### SCHOLAR'S SONG.\*

BY MRS. J. H. HANAFORD

ANOTHER term has passed away,  
Another six months fled,  
Since last Examination Day—  
How quickly time has sped!  
Days, months, and years do swiftly pass;  
Oh, schoolmates, value now  
The happy sunshine hours that beam  
Upon each youthful brow!

As pupils lessons oft review,  
So let's review the past;  
For every wrong we'll pardon sue,  
And all be right at last.  
It may be, schoolmates, we have grieved,  
At times, our teachers dear;  
We've broken rules, or idly spent  
Our precious moments here.

If so, forgiveness we will crave—  
Dear teacher, pardon all—  
And to each other we'll forgive  
Offenses great and small.  
And so in peace we'll close this term,  
And this our parting song—  
God's blessing on our teachers dear,  
And on this youthful throng.

In other days, in other years,  
When school-days all are o'er,  
When scholar's hopes and scholar's fears  
Are known to us no more,

A mighty influence will be felt  
Around our earthly way,  
As we, in mem'ry, turn to this  
Examination Day—

An influence which may lead us all  
Truth's pathway to pursue,  
And ever list to wisdom's call,  
And be to virtue true;  
And true to all we have been taught  
By teachers whom we love;  
So teachers, pupils, all will meet  
In happiness above.

### WILL YE MEET AGAIN?

*Lines addressed to a school on the final separation of  
teacher and pupils.*

BY MRS. E. M. GUTHRIE.

Will ye meet again when spring zephyrs gay  
Through the budding boughs and the young  
leaves play?

Will ye meet to mingle your cares and tears,  
Your joys and your sorrows, your hopes and  
fears?

Not then, not then; no, the spring time will fly,  
But ye will not meet when 'tis long gone by.

When summer comes with her smiling flowers,  
Will ye not meet here, through sunny hours?  
Ye, whose hearts are bound with the strength  
of years,

Will ye not come back when summer appears?  
Nay, my heart says nay—summer hours will fly  
And ye will not meet when they are gone by.

Will ye meet again when gay autumn brings  
Her offering of rich and beautiful things?  
When the green leaves change to a tinge of gold,  
And the warm south breezes grow chill and cold?  
Nay! the autumn leaves will gently decay,  
And ye will not meet when they're passed away.

Will ye meet when winter returns again,  
And wild, chilling winds sweep over the plain?  
Will ye come to mingle sweet voices in song,  
That bears the full tide of spirit along?  
Nay! winter will go with memories dear,  
But something tells me ye will not be here.

Nay, ye will all meet as now ye are met,  
I know by that sigh of mournful regret—  
By the mellowed tone of the glance of love,  
That tells ye feel there is union above.  
By the soft, sad smile, by the gushing tear,  
I read, beloved ones, ye will ne'er meet here.

\* Sung at the High School Examination in Nantucket.



## SIDNEY'S CONVERSATION WITH THE CHILDREN,—No. II.

### WHIRLWINDS, HURRICANES, SIMOONS, AND SIROCCOS.

**G**OOD MORNING, children, I am happy to see you so punctual to-day. I suppose you have come to hear something more about winds.

*Mary.* Yes, uncle, you know you said you would tell us more about them to-day.

*Sidney.* So I did, and I am quite pleased to see you so fond of learning. But what shall I talk about first?

*Henry.* Tell us of whirlwinds; I want to know what makes them.

*George.* Yes, do, uncle; I saw a whirlwind last week. It came over me and took my cap off, and lifted it straight up in the air. I did not know before that wind could lift any thing up like that.

*Sidney.* That is not so strange as an account of a whirlwind which occurred in France, in June, 1839. Some needle-work and a pillow-case were taken up a chimney, and the next day they were found in a field many rods from the house.

Such winds are sometimes so powerful that they lift heavy objects into the air. It is said that a whirlwind occurred at Maysville, Ohio, in 1842, which lifted a barn, containing four horses and three tuns of hay, from its foundation.

*Mary.* What a strong wind that was! It would blow away a man, if he should happen to be in its way.

*Sidney.* Such a thing has happened. Two persons were walking together, in Germany, when suddenly a whirlwind came upon them, drove one against a wall, and threw the other into the adjoining field.

*George.* Are whirlwinds made by heat, too?

*Sidney.* Yes, George, all winds are caused by the influence of heat on the air. A whirlwind is formed by the meeting of opposite currents of air, which heat has set in motion.

*George.* But what makes the whirlwind lift things from the ground?

*Sidney.* When these currents of air meet, the air, being expanded by heat, rises up very rapidly.

*George.* Do whirlwinds last long?

*Sidney.* No, not usually more than a few seconds in the same place, for they move along. Violent whirlwinds are called *Tornadoes*. These sometimes travel ten or twenty miles, and they often move at the rate of a mile a minute. Whirlwinds are not usually more than a few rods in width.

*Mary.* What are Hurricanes?

*Sidney.* Hurricanes are great whirlwinds. They vary from fifty to five

hundred miles in diameter, and move forward at the rate of from seventeen to thirty miles an hour.

*Henry.* Where are hurricanes seen?

*Sidney.* They usually occur in warm climates, and are by far the most frequent and powerful in the torrid zone.

*Jane.* I read something about a wind called the *Simoom*, a few days since; I wish you would tell us something about that.

*Sidney.* Can you tell me where those occur, Jane?

*Jane.* I think it is on the dry, sandy plains of Asia, and the great deserts of Africa.

*Sidney.* That is right. Now I will try to explain the cause of the *Simoom*. These great deserts and plains of Africa and Asia are covered with dry, quartz sand. This sand becomes so heated by the rays of the sun that it is burning to the touch.

This intense heat of the sand is imparted to the air, which causes it to expand and rise very rapidly. The cool air from the adjoining country rushes in to take its place, and in so doing raises the fine, dry sand in dense clouds.

Remarkable stories have been told of the *simoom*. Some, that it was a poisonous, fiery blast, which instantly destroyed life; others, that it has been known to overwhelm and bury whole caravans. Such stories are considered as fiction, by modern travelers.

The blast of the *simoom* does not inflict instant death, but it is a dreadful visitant to the traveler on the desert. The wind is so dry and hot that his skin becomes parched, his throat inflamed, and a raging thirst created.

What adds still more to this calamity, the burning blast often dries up the traveler's water, and thus deprives him of his only means of relief from suffering. Hence the principal danger, which the traveler has to fear from the *simoom*, is the loss of his water, and, in consequence, death from thirst.

*Mary.* That must be dreadful!

*George.* I should not like to travel on those deserts.

*Jane.* What do the people do when they see the *simoom* coming?

*Sidney.* They take the skins in which they carry their water from the backs of their camels, and cover them up as well as they can with blankets, cloaks, etc., to keep the heat from the water.

Then they lie flat on the ground until the *simoom* has passed. The camels lie down also, and sometimes they plunge their heads into the sand.

This storm of sand does not usually last more than ten or fifteen minutes, and when it has passed the people reload their camels and proceed on their journey.

*Henry.* Are there any other winds like the *simoom*?

*Sidney.* Yes, there is a southeast wind that blows over the islands of the Mediterranean Sea, and along the shores of Italy. This wind blows during the summer and autumn. The people that live where this wind comes lie on sofas, carpets, and on the bare ground, while it lasts.

This wind is *hot* and *moist*, and causes such a profuse perspiration that the body soon becomes weak and languid.

*George.* Where does this hot air come from?

*Sidney.* It is generally supposed that it blows over the Mediterranean from the burning sands of Africa. It is heated on the sandy deserts, and gets its moisture from the sea.

I have not time to tell you more about winds to-day, but if you will come again next week, I will tell you about Trade Winds and Monsoons.

*Henry.* I thank you, uncle, for telling us so much to-day, and I assure you that we shall be pleased to come again to learn more on this interesting subject. Good-bye, uncle.

*Sidney.* Good-bye; be good children.

## For Children.

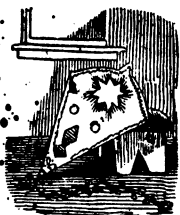
"To aid the mind's development, and watch  
The dawn of little thoughts."

### GEORGE AND HIS KITE.

**N**OW more it is spring, and the boys are out with their kites each fine day when the wind blows.

George has a new kite, which his brother James made for him.

It is a noble kite, and George is fond of flying it.



Here is a picture of his kite. It is lying on a small bench in George's room.

See the large, bright star near the top of it! And see the tassels on the sides! It has a long tail, which lies on the floor.

One day when George came home from school, he put aside his books, and took his kite and went out to fly it.

He was very fond of this sport, and in a few minutes the kite rose fast, and went high up in the air.

George let it draw the string through his hand, and it went

up higher and higher, till it was so far away that it looked like a small thing floating in the sky.

Sometimes it would mount up, then down, and up again, as if it were about to plunge into the clouds. Then it would dive down toward the earth again:

Thus it would dart up and down, and tug and pull to get away, but George held it fast.

When he pulled very hard it would mount up higher, and when he let the string loose, it would sink down again.

When his papa came home to tea, he told George to take a piece of paper, and cut a hole in the center, then put the string through it, and let the paper go up to the kite.

George did so, and as the wind blew against the paper, it would slide along the string till it came to the kite.

This pleased George much, and he called the bit of paper that he sent up to his kite, his messenger.

Then he took some pieces of red, and blue, and white paper

cut holes in them, placed them on the string, and sent them up to the kite.

But at length he had sent up so many bits of paper that his kite began to be heavy and did not fly so well. Then he pulled it down and took off the messengers.

The tea bell now rung, and George put away his kite and went in to tea.

After tea was over, his papa told him of a man who once made a kite of silk, and sent it up to the clouds when there was a thunder storm.

If you will ask your papa, I think he can tell you who this man was, and a great many pleasing stories about him.

## AUNT ELIZA'S STORIES,—No. XII.

### ANECDOTES OF DOGS.

**T**HERE is no animal in the world that is more faithful, obedient, or attached to its master than the dog. Some of them, indeed, have been known to die of grief for the loss of their master.

A little boy, whose pet plaything was a beautiful spaniel dog, died after a short illness, and the dog followed the family to the grave.

For several days he was missed

from the house, but at length he returned, and after looking around, as if in search of his little master, he went away.

Again he returned, and went as before; and, what was very singular, this family missed several things that had been little Henry's. They watched the dog when he came back, and saw him take his young master's top, and run off at full speed.

On following him to the grave, they found he had dug a deep place in it, and in this cavity he had put whatever things of the little boy's he could find, among which were a cap, a pair of shoes, and several toys.

They took him away and shut him up at home; but he refused to eat, and cried and whined so piteously that they released him when he went directly to the grave, stretched himself upon it, and there remained till he died.

I believe this story to be true, as it was related to me by the aunt of the little boy, and certainly it is a very affecting instance of the wonderful love of a poor dumb animal for his master.

The parents and friends of the little boy lived, and in a few years were doubtless as happy as ever, but the faithful dog mourned himself to death over the grave of his dearest friend.

Many are the instances where children have been lost in the woods and have been found by means of dogs; and many a child

has been rescued from drowning by the noble Newfoundland dog. Here is a picture of one.

This is one of the most beauti-



NEWFOUNDLAND DOG.

ful and intelligent of animals. It almost seems as if he possessed reason, so often does he act with a wisdom we hardly think a brute can possess.

He is noted for his love of children, and sometimes he is quite an annoyance by visiting schools, to the terror of some, and the great amusement of others.

But let a child fall into the water, and quick as thought he plunges in, seizes the little creature by the hair, and holding the head out of water swims to the shore.

A Newfoundland dog seeing his master fall overboard from a

ship sprang after him, and succeeded in seizing him, just as he was sinking.

But the great weight of his master and his own exertions so exhausted him, that, just as he reached a boat which had put after him, he let go his master.

As he was about to sink, from being exhausted, one of the sailors, who could not bear to see the noble animal perish, leaped into the sea, and by means of a rope saved him from a watery grave.

Almost every child has heard of the dogs of St. Bernard. This is a house on the Alps, the highest mountains in Europe. There



are no other houses in a great distance, and the way is very dangerous, for instead of wide, pleasant roads, as we have here, there is but a path, sometimes winding over rocks and down deep gorges, full of danger at every step.

Sometimes a storm comes up suddenly, and the snow is piled in drifts, and the unhappy traveler who has failed to reach St. Bernard, is in danger of losing his life by falling from those terrible rocks, or by perishing with the cold.

Then come these noble dogs. They are sent by the kind people of St. Bernard, and each one has a cloak tied on his back and a flask of wine about his neck.

They snuff the snow, and, having found the unhappy person, they dig till they reach him, and then stretch themselves beside him to warm him; and if he succeeds in rising he wraps himself in the cloak, drinks of the wine, and is led by his faithful guide to a warm fire and kind friends.

In some countries the dog is used to draw loads. Six of them are harnessed together before one sled, and it is said they will travel fifty miles in a day.

This is in countries where it is so cold that horses and oxen can not live. There the dog

is the most valuable animal that the people possess.

I just now recollect a story a man told me when I was quite young. His wife, after laying her sleeping babe on the bed by the side of the dog, swept the hearth, and went out into the field where he was at work.

When she was about to return, she perceived the house was in flames, caught no doubt from the broom, and, sad to relate, the poor little babe was burned to death.

But what was very wonderful, the dog perished too, although the window of the room was wide open; and his bones were found near those of the little child to which he was so attached.

### I WILL BE GOOD TO-DAY.

BY ISABELLA R. BYRNE.

"I WILL be good, dear mother,"

I heard a sweet child say;

"I will be good; now watch me—

I will be good all day."

She lifted up her bright blue eyes,

With a soft and pleasing smile;

Then a mother's kiss was on her lips,

So pure and free from guile.

And when night came, that little one,

In kneeling down to pray,

Said, in a soft and whispering tone,

"Have I been good to day?"

Oh, many, many bitter tears

'Twould save us, did we say,

Like that dear child, with earnest heart,

"I will be good to day."

*Selected.*

## Phonography.—Lesson 12.

## PHRASEOGRAPHY.

WORD-SIGNS and unvocalized skeletons are often joined together without removing the pen, and written as one word, though composed of several words and constituting a phrase. This is done to accelerate the speed of writing. The vowel word-signs are also frequently joined to a skeleton; as, *you-are*, *I-have*, *who-are*, *we-have*, etc.; and the auxiliaries are often joined to each other, and to their verb; as, *have-been*, *should-be*, *must-be*, *will-not-be*, etc.

In forming these phrases the following directions should be observed:

First. Unless the different words make a distinct angle with each other, the phrase should not be formed. Thus, *on-which* could not be written, but *of-it* may be used.

Second. The phrase should not be used unless the skeletons have well-established and familiar forms.

Third. The phrase should not be formed where a vowel word-sign might be confounded with a hook; thus, in *you-have*, the *you* is placed on the opposite side of *have* from the l-hook; but *you-say* could not be used in a phrase, for it would read *thr*.

When a vowel word-sign begins a phrase, it is put in its proper position, whether on or above the line, and the joined skeleton is placed in the position of the vowel; as, *what-could*, *to-be*, etc.

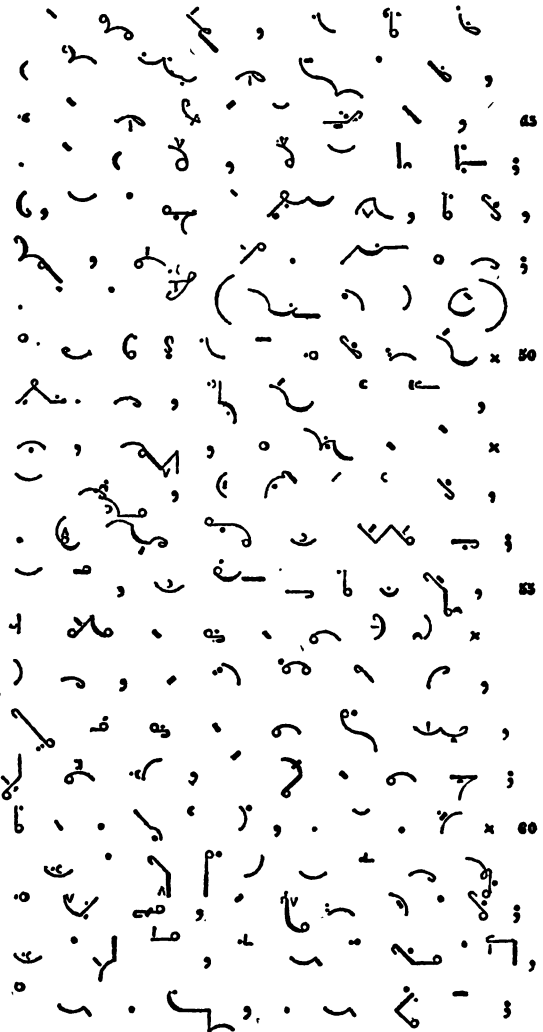
A consonant, or skeleton word-sign, when it begins a phrase, is put in its proper position, and the rest of the phrase is adjusted to it; as, *without-doubt*.

In the phrases, *I-have*, *I-am*, only one half of *I* is written; this half is either the first half downward, or the last half upward. The upward half of *I* may be-joined to *cannot*, but the full *I* is written before *can*, and above the line.

*I am* and *I may* are made alike; hence the

## POPE'S ESSAY ON MAN.

## EPISTLE I.



same phrase stands for each, but *I may* has the vowel inserted.

The vowel word-sign for *should* is written upward; the rest are made downward. This rule should be observed when they are joined to other words. Word-signs are sometimes used as prefixes and affixes; as, *afternoon*, *hereafter*.

# Exchange Department.

## NOTICES OF EXCHANGES.

From the pupils of Mr. E. H. Johnston, Cohoes, N. Y., we have recently received a package of drawings and specimens of penmanship. Names of the pupils: Lucinda N. Goff, aged 13; Emma Hahn, 9; Clara Hahn, 7; John S. Deitz, 13; Silas Buss, 14; Isaac V. Fletcher; John Parkhurst, 10; Jeremiah Fairbanks, 13; Lewis J. Herrington, 13; Albert Hay, 10; James Lewis, 6; Thomas V. Wolcott, 9.

From Ermina H. Pollard, aged 13, of Henniker, N. H., we have just received two drawings.

From Thomas E. Bartow, aged 15, a pupil of J. N. Voorhees, at North Branch Academy, N. J., we have two fine pencil drawings—one a portrait of Andrew Combe, and one a landscape. Both display skill.

From the pupils of Miss H. A. Carver, Shrub Oak, Westchester Co., N. Y.: Martha J. Conklin, aged 13; Julia A. Conklin, 15, a drawing of the Charter Oak; Ann Matilda Requa, 13; Mary Jane Nelson, 14; Sarah F. Nelson, 11.

From the pupils of Public School No. 7, Brooklyn, N. Y., David Syme, A.M., Principal: William Nichols, aged 14; Wm. V. R. Sexton, 12; Joseph Nash, 14; Thomas Stuchfield; Albert B. Campbell, 13; Wm. G. King, 13; Wm. Elwell. These pupils have furnished us with some good specimens, and we hope to receive many more from them.

## QUERIES.

### MATHEMATICAL.

From the pupils of G. Case, Wykertown Academy, Wykertown, N. J.:

1. A single lady being asked her age, considering the question impertinent, gave the following reply: If you take 4 years from my age, and extract the square root of the remainder, then multiply the root by 4, and to the product add 4, the sum will be 24; what was her age?

From Public School No. 7, Brooklyn, N. Y., David Syme, A.M., Principal:

2. A ship of war sailed with 650 men, and provisions for a cruise of 15 months. At the end of 3 months she captured an enemy's vessel, and put 95 men on board of her. Five months after she captured and sunk another vessel, and took on board the crew, consisting of 350 men. How long from the time of sailing would the provisions last?

From F. R. Jones, Grahamsville, N. Y.:

3. A person being asked his age, answered, Extract the cube root of *three fourths* of the number of years I am old, + 62, and the root

will be *one fourth* of the number of years of my age. What was his age?

4. In how many different positions may the letters in the word PERSEVERANCE be written?

From Matilda Cooper, aged 12, a pupil of Eliza A. Chase:

5. A person bought 20 hogsheads of milk, wine measure, at 4 cents per quart, and sold it again by beer measure at the same rate. Did he gain or lose by the bargain? How much?

### ANSWERS TO QUERIES.

Answers to the questions in the February and March numbers have been received from the following schools and individuals, viz.: N. M., of Troy, N. Y.; A. H. Fort and pupils, Cazenovia, N. Y.; F. R. Jones, Grahamsville, N. Y.; pupils of G. Case, Wykertown Academy, Wykertown, N. J.; G. H. Stebbins, Brooklyn, N. Y.; pupils of E. H. Johnston, Cohoes, N. Y.; also from pupils of Miss Eliza A. Chase, Orange-town, N. Y.

Answer to the 3d question in the February number. The field would be 10 miles square, containing 64,000 square acres, and 64,000 rails in the fence. Solved by Algebra— $x = \text{No. acres}$ —then  $160x = \text{No. square rods}$ , etc.

Answer to the 1st question in the March number: 30 feet. The solutions to this were principally given by Algebra. The following rule will enable those who are not acquainted with Algebra to solve questions of this class:

Having *one side* of a right-angle triangle, and the *sum of the hypotenuse* and the *other side* given to find the unknown side—

RULE.—Square the sum of the hypotenuse and the unknown side, and from that subtract the square of the given side, then divide the remainder by *twice* the sum of the unknown side and hypotenuse, and the quotient will be the unknown side.—

Solution of No. 1 (March). The square of 80 is 6400—1600 (the square of the given side) = 4800 ÷ 160 (twice the sum of the unknown side and hypotenuse) = 30 (the unknown side).

Answer to the 2d question, March number: The numbers are 10 and 6.

We are happy that so many have responded to our request to furnish us with questions for the exchange department, and shall be glad to hear from the same persons again, and also from others.

## Editor's Cable.

### TO ALL OUR FRIENDS.

WITH this number closes the first year of The Student in its present form. Those of you who subscribed for it for one year, and commenced with last May, have now received all the numbers due you; and those, too, who paid for only six months, and commenced with last November, have also received all they have paid for. Our terms, you know, are in advance, and we do not send The Student to those whose subscription has expired; but we should feel quite sorry to have any of you forsake us after such a pleasant and agreeable acquaintance as ours has been during the past year.

Some of you have known us a much longer time, and, like truest friends, have continued to keep fresh that acquaintance. Of course we shall expect to greet your happy faces, as usual, during our monthly visits for the new year we are now about to commence. And we hope, too, that the multitudes of new friendships, formed during the past year, and the new faces that have welcomed us, will prove like the older and tried ones—true and constant.

We already have many hundreds of friends in the balmy South, and hope to find many more there during the coming year. And away in the far West, scattered over the lovely prairies, and along the banks of many a noble river, and by the shores of beautiful lakes, are thousands of our friends. Around many a farmer's happy fireside, and beneath hundreds of newly-built cottage roofs, throughout the West, has The Student received a hearty welcome. And throughout the New England States, and all the North, it has visited town, village, and hamlet.

Now, kind friends, shall we continue our acquaintance during the coming year? It remains for you to decide. Shall we again write your names in our mail-books? We address each and all of you, whether residents of a city, inhabitants of a village, or dwellers in the country, by lake or streamlet, on towering mountain or in lowly valley, on hill or extended prairie, in North, East, South, or West, and ask you to read the circular letter on the cover of this number, then to take the prospectus and see how many of your friends you can introduce to us.

We now send The Student to hundreds of

post-offices where there are but one or two copies taken, and many of those were subscribed for but a few months since. Now, if you are one of those lonely subscribers, call on your friends, get them to join with you, and send for a large package. Many have already done so, and you can do the same if you will but try. If all of you will do this it will more than double our subscription list, and we should then feel like trying harder than ever to please you, and to furnish you with the best youth's magazine published in this country.

**SCHOOL PAPERS.**—We are happy to welcome these scions of the newspaper press, and will cheerfully send The Student in exchange. We have before us "The Institute Omnibus," published at the Young Ladies' Institute, Pittsfield, Mass.; "The Home School Journal," edited and published by the teachers and pupils of The Home School, Youngstown, Ohio; "The Acorn," edited and published by the superintendent and students of the Ashland High School, Ashland, Ohio; "The Gleaner," edited and published monthly by the students of the Sandusky City, Norwalk, Milan, and Plymouth Public Schools, printed at Sandusky City, Ohio; "The Crystal," published quarterly at the Maine Female Seminary, Gorham, Maine.

These school papers are usually folios of about nine by twelve inches in size. The Crystal is a quarto, and of a somewhat larger size. Their contents are original contributions from the pupils who attend the schools at which they are published. Their chief object, and that a most valuable one, is to stimulate improvement in composition writing.

We are pleased with the plan upon which The Gleaner is conducted. The schools of several neighboring towns join together, each having a department for itself, and furnish brief compositions, also contribute their share toward its expense. This plan must present a double stimulus for excelling.

**OUR WHITE COVER.**—The cover for the present number is printed on white paper on account of the title-page and contents. By doing this we use only two pages of the usual number in The Student for contents. The next number will appear as usual with colored paper for cover, and a new engraving for title-page. *Onward* is our course, and *improvement* our aim.

## NOTICES OF PUBLICATIONS.

**THE BARDS OF THE BIBLE.** By George Gilfillan. 12mo. 323 pages. Published by D. Appleton & Co., 200 Broadway, New York. 1851.

This work is a reprint from an English edition. Its author is a Scotchman. His style possesses poetical imagination and a strangely glowing enthusiasm, and abounds in lively eloquence, which at times seem labored in its efforts after the beautiful and striking. An idea of the object of the present work may be gathered from the following extract from its introduction :

"It is of the Bible, not as a revelation of *special*, but as a poem embodying *general* truth, that we propose in the following work to speak. Our purpose is not to expound its theological tenets, nor its ritual worship, but to exhibit the beauty of the poetic utterance which the writers have given to their views and feelings."

**POEMS OF SENTIMENT AND IMAGINATION**, with Dramatic and Descriptive Pieces. By Francis A. and Metta V. Fuller. 12mo; pp. 264. Published by A. S. Barnes & Co., No. 51 John Street, New York. 1851.

This work is a collection of the poetical writings of two young poet-sisters of the West, who have already attained a flattering distinction among the female authors of our country. They write with great facility, and display much poetic genius; yet there is a lack of experience and high artistic skill; but even this seems well-nigh obscured by native-born genius and originality.

**A SUMMARY OF BIBLICAL ANTIQUITIES**; for the use of Schools, Bible Classes, and Families. By John W. Nevins, D.D. 12mo; pp. 447. Published by the American Sunday-School Union, No. 146 Chestnut Street, Philadelphia, Pa., and 147 Nassau Street, New York.

This work is beautifully illustrated with numerous engravings explanatory of its subject. It is divided into *Two Parts*. Part I. treats of the geography, climate, natural history, dwellings, household accommodations, occupation, meals, dress, social intercourse, domestic customs and habits, diseases and funeral customs, political institutions, and miscellaneous matter of the land of Palestine. Part II. treats of general history of religion, the tabernacle, the temple, ministers, sacrifices, sacred times, the Jewish church, synagogues, and religious sects. It is a valuable work of reference.

**CONSUMPTION OF THE LUNGS, OR DECLINE**; the Cause, Symptoms, and Rational Treatment, with the Means of Prevention. By T. H. Yeoman, M.D. Revised by a Boston Physician. 12mo; pp. 108. Published by James Munroe & Co., Boston.

This work is written by one who has long made pulmonary complaints a special study. Its style is plain, intelligible, and within the comprehension of all.

"A TRAP TO CATCH A SUNBEAM;" "Only;" "Old Jolliffe;" "The Sequel to Old Jolliffe," and "The Dream of Chintz." By Miss Planché. 18mo; from 80 to 130 pages each. Published by James Munroe & Co., Boston, and Cambridge, Mass.

These little works are extremely interesting, and breathe a spirit of sunshine, contentment, and happiness. We recommend those who are in the habit of complaining of their condition in life to procure these works and read them; especially the "Trap to Catch a Sunbeam," and "Old Jolliffe." If one will but bait the "trap" as directed in this work, we are sure he will catch a "sunbeam." "Old Jolliffe" is always a happy fellow, cheer-

ing up all around him, and driving away despondency; and he teaches many valuable lessons.

**FIRST LESSONS IN COMPOSITION**, in which the principles of the art are developed in connection with the principles of grammar; embracing full directions on the subject of punctuation; with copious exercises. By G. F. Quackenbos, A.M. 12mo; pp. 182. Published by D. Appleton & Co., 200 Broadway, New York. 1851.

We are glad that this work has been published. Composition is a branch that is woefully neglected in our schools. It has been difficult, we are aware, to give much instruction on this subject, owing to what seemed almost an instinctive prejudice on the part of pupils, and to the absence of a practical, systematic, and simple treatise which could be placed in the hands of pupils as a text-book. We hope teachers will turn more attention to this subject. The above work contains much that is valuable.

**A PRACTICAL SYSTEM OF MODERN GEOGRAPHY**, for Exercise on Maps. By John J. Anderson. 18mo; pp. 108. Published by J. S. Redfield, Clinton Hall, New York. 1851.

The design of this work is to present a simple, practical geography, teaching the location of places, forms of continents, oceans, seas, etc., without being cumbered with notices of geology, history, politics, etc., etc.

**THE CHORUS GLEE BOOK**, consisting of Glee, Quartets, Trios, Duets, and Solos, mostly selected and arranged from the best European and American Composers. By I. B. Woodbury, assisted by Thomas Hastings. Published by Huntington & Savage, 216 Pearl Street, New York.

This work contains many simple, popular pieces, and is well adapted to choirs and social singing circles.

**THE INTERNATIONAL MONTHLY MAGAZINE OF Literature, Science, and Art.** Published by Stringer & Townsend, 223 Broadway, New York. Price \$3 00 a year, in advance, or 25 cents a number.

This magazine completed, with the March number, its second volume. Each volume contains four numbers of from 144 to 160 pages each. Volumes I. and II. are bound in cloth, separately, and sold for \$1 25 each. Each number of this magazine is an improvement on its predecessor; it presents a vast amount of valuable reading.

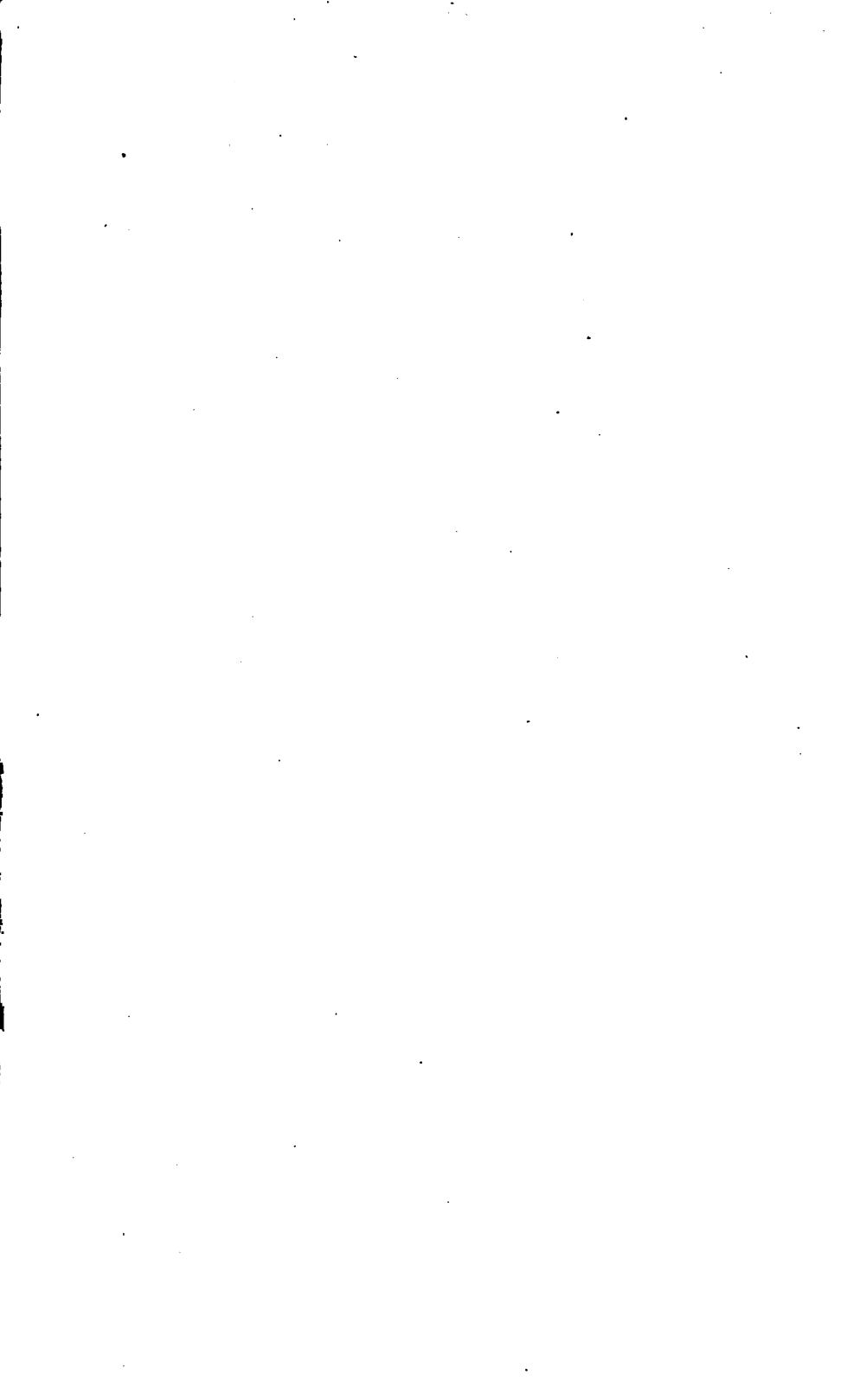
**THE NORTH AMERICAN MISCELLANY**, a Weekly Magazine of Choice Selections from the Current Literature of this Country and Europe. Published by A. Palmer & Co., 8 Barclay Street, New York. Price 6¢ cents a number, or \$3 00 a year.

The first number of this magazine was issued on the first of February last. Each number contains 48 pages, octavo, double columns. It is well conducted, and got up in a neat style. The selections are excellent.

**HARPER'S NEW MONTHLY MAGAZINE** for March contains "Spring," from Thomson's Seasons, beautifully illustrated; and besides its usual choice selections, it has a few leaves from Punch, with comic illustrations. This magazine is got up in an excellent style.

**THE AMERICAN RAILWAY GUIDE** for the United States is an almost indispensable companion for the traveler by railroad. It gives the distances, fares, and time of leaving each station on all the railroads in the Union. Published monthly, at the Pathfinder Office, 138 Fulton Street, New York. Price 12½ cents.

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